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The AVIATION News

JULY 19, 1930

A Reporting Service for Busy AVIATION *Men*

United Moves to Acquire Varney

Dominion of Canada Approves Radio Code

Put Drop in Exports at 11 Per Cent

Insurance Case Won by Canadian Mining Firm

News of the National Air Races

League of Nations Adopts Aviation Study Program

Looking Back a Quarter of a Century

Published by McGraw-Hill Publishing Co., Inc.
Publishers of AVIATION

. . and the

HUNTER BROTHERS *picked a* WRIGHT *to win!*

With Wright motors, men have spanned the oceans and have topped the Poles. Flight after flight has proven their endurance and reliability. These magnificent engines stand today with records unequalled by any others in the world.

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WRIGHT
AERONAUTICAL CORPORATION
PATERSON, NEW JERSEY

AERONAUTICAL CALENDAR

July 21	All-America Flying Derby, starting from Detroit, Mich. Sponsored by American Cirrus Engines Inc. Meryville, Mich.
Aug. 8-17	Great Lakes Air Cruise starting from Detroit Mich. auspices Detroit Flying Club.
Aug. 23-Sept. 1	National Air Races, Chicago Ill.
Sept. 1	Gordon Bennett International Balloon Race, Cleveland Ohio
Sept. 21-27	National Air Tour, starting and ending at Detroit, Mich. Manager Capt. Ray Collins
	FOREIGN
July 28-Aug. 7	International Light Plane Tour, starting from Tempelhof Airport Berlin, Germany
Aug. 9-24	International Gliding Meet, auspices Rhoen-Rossiten Gesellschaft the Wasserkuppe East Prussia, Germany
Aug. 25-31	Italian Light Plane Tour, starting at Leeding at Rome.
Sept. 1-5	Fifth International Air Congress, auspices Dutch Royal Aero Club The Hague, Holland.
Nov. 28-Dec. 14	International Aero Show Grand Palais, Paris, France under the auspices of Chambre Syndicale des Industries Aeronautiques.
Dec. 10-23	First International Aerial Safety Congress Paris, France.
May 15-31, 1931	International Aero Exhibition, Stockholm, Sweden
	MEETINGS AND CONFERENCES
Aug. 18-21	National Legislative Air Conference Levy Mayer Hall of Law, Northwestern University Evanston, Ill.
Aug. 26-28	S.A.E. Aeronautic Meeting, Chicago, Ill
Sept. 1-5	Fifth International Air Congress, under the auspices of the Royal Aero Club The Hague, Holland
	DEDICATIONS AND MEETS
July 19-20	Elks Annual Air Circus Teterboro Airport, Hasbrouck Heights N. J. Russell J. Brinkley director
July 26	Virginia Minn. Municipal Airport
Aug. 1-2	McGhee Tyson Airport, Knoxville Tenn.
Aug. 3-3	Air Meet, Danville, Ill.
Aug. 3	Carroll Ia. air show, managed by B. Freeman
Aug. 9-10	Air Fair Grand Rapids, Mich. Airport
Sept. 1	Wauchula, Fla., Airport
Sept. 1-4	Second Annual Sioux Falls (S.D.) Air-fair
Sept. 13-14	Williamson Johnson Airport, Duluth, Minn.
Oct. 17-20	Denver, Colo., Municipal Airport

The AVIATION News

Vol. 1, No. 2

JULY 19, 1930

HIGH POINTS in the NEWS

▶ *Explained* Aeronautics Branch issues interpretation of regulations covering issuance of Certificates of Authority for airlines, now gives companies until August 15 to apply for certificates. Page 3

▶ *Addition.* United Aircraft & Transport Corp. gains control of Varney Air Lines through a 57 per cent stock acquisition Page 5

▶ *High-powered situation.* But one formal protest against lack of events in National Air Races for high-powered craft has been received, race contest committee officials assert Page 8

▶ *Chosen* Decide upon starting points for the seven derbies to the National Air Races Page 8

▶ *Not so bad* Comparison of first five-month periods for 1929, 1930, show this year's exports are only 11 per cent under those for last year Page 6

▶ *At Geneva* League of Nations committee draws up aviation study program at conference held July 7-12. Page 9

▶ *Accepted* Recommendations made to Canada for international coordination of radio and other communication aids for air navigation approved by that country Page 17

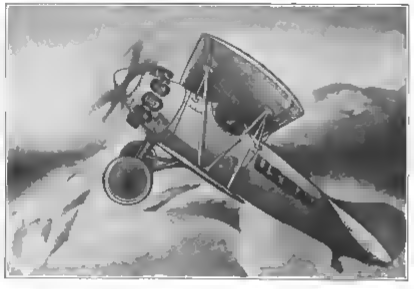
▶ *In favor of the plane* Obalski Chibougamon Mining Co. to get $14,185 from Aero Insurance Co. court decides, for insured craft which fell in lake, case involves precedent points Page 5

▶ *Mail savers* National Air Transport will shortly place in use fire-proof mail pouches developed by Johns-Manville Corp Page 7

▶ *Ready to go* Twenty-one entrants listed for All-America Derby sponsored by American Cirrus Engines, dated for start from Detroit on July 21 Page 10

▶ *Leniency* Graduation within certain period of time not necessary and hourly or part time training now allowed by changes in approved school regulations Page 10

▶ *Traffic* Curtiss-Wright Flying Service reports continuous upward trend reflected in operations for first six months of this year Page 7



LT. APOLLO SOUCEK, U. S. N.

HIGH IN THE SKY

READY FOR THE FLIGHT

LIEUTENANT Apollo Soucek, U. S. Navy Aviator established world's new altitude record of 43,166 feet on June 4th, 1930 with Wright Apache plane powered with Pratt & Whitney "Wasp" Engine . . . lubricated with

GULFPRIDE OIL 120

Lt. Soucek reports . . . "As far as the engine in the Apache is concerned, it worked perfectly on this record flight . . . *A High Grade Gulf Oil Called GULFPRIDE* was used for lubrication."

Lubricate your aircraft, motor car or motor boat with

GULFPRIDE OIL

America's Finest Lubricating Oil for Automobile, Motor Boat and Aircraft Engines.

GULF REFINING COMPANY

Tanager Features On Army Airplane

NEW YORK—Production is now underway at the Garden City plant of the Curtiss Aeroplane & Motor Co of two F8C-4 two-seater carrier fighters, to be equipped with floating ailerons slots and flaps similar to those which featured the Curtiss Tanager, winner of the Guggenheim Safe Aircraft Competition. Operation of these safety devices will be the same as on the Tanager, the flaps being mechanically operated by the pilot the slots automatic and the floating ailerons being placed as continuations of the lower wings.

Aero Branch Interprets Airline Certificate Rules

Assert Present Draft is Tentative And Open to Discussion by Industry

WASHINGTON — The long-awaited interpretations of the general provisions of its Certificate of Authority plan for regulation of interstate air passenger transportation announced in the May 17 issue of AVIATION, have just been issued by the Aeronautics Branch. The general rules were set forth in Aeronautics Bulletin No. 7-E. These now are made much more specific by the issuance of the proposed interpretations, and a tentative draft of these has been completed and distributed for comment and criticism by interested parties. Not as yet finally promulgated they represent the trend taken by departmental opinion.

Coincident with their issuance, the Aeronautics Branch has stated that the closing day of the period of grace for filing application for the Certificates by the individual airlines, had been extended from July 15 to August 15. This extra time allowance has been granted chiefly because of the air mail complications. One of these is the ruling under the Watres Bill that air mail operators on daylight schedules must provide seats for at least two passengers.

Details of Regulations

Thus the regulations provide merely that "Aircraft shall be provided with suitable instruments and equipment and shall be properly adaptable to the nature of the service involved, and to the conditions attendant thereon." The proposed interpretations go on to demand among other things that for day flying there shall be 'compass, instrument or instruments to indicate banking and turning, complete set of engine instruments, air speed indicator, climb indicator altimeter, fire extinguishers, safety belts first aid kits clock and an adequate method of determining amount of fuel in the tanks at all times. Suitable containers are to be provided when smoking is permitted. Complete maps for the route must be carried and in addition zone maps covering an area of seventy-five miles on each side and beyond ends of the route showing the location of airports, radio communication stations, radio beacons, and intermediate landing fields." For night flying all this must be supplemented by 'electric' landing lights navigation lights cabin lights instrument board lights with rheostat control, (all lights to be controlled from pilot's cockpit) two flash lights of adequate size, at least two approved flares of parachute type."

Radio Not Definitely Asked

Radio is not proposed to be definitely required as yet but "When equipment has become suitably available and its practical application demonstrated" there shall be on all aircraft "approved radio receiving apparatus for the purpose of receiving radio range beacon signals and/or weather broadcasts; all aircraft with passenger capacity of eight or more, exclusive of crew, shall in addition be provided with two-way radio communication facilities capable of communication at all times under normal conditions with one or more of the ground stations provided." Headwinds are guarded against in the interpreta-

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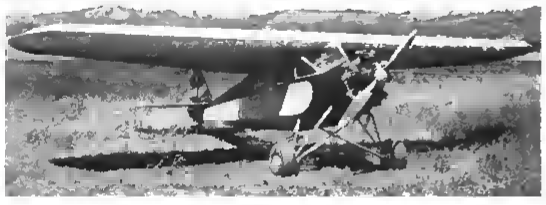
The Latest Kari-Keen Model Offered to the Market



THE MONOPLANE Kari-Keen 90 which differs slightly from the model shown at the Detroit show Changes include a slight modification of the cabin front design, relocation of landing gear struts at the fuselage, and the use of Airwheels Kari-Keen Aircraft Inc Sioux City, Iowa, announces a list price of $3,365 for the two-place, side-by-side Lambert-powered craft which has a length overall of 22 ft 4 in and a span of 30 ft

tions by the exaction that 'Suitably located intermediate refueling stations shall be provided unless the plane carries 35% additional fuel and oil in excess of that normally required for flight between the scheduled stops"

Equally detailed are proposals for personnel A co-pilot is to be required when "(a) aircraft capacity is fifteen passengers or more or (b) gross weight of aircraft is 15 000 pounds or more and/or (c) where the pilot flies a schedule of four hours or more in any one day on aircraft having a seating capacity of eight passengers or more, "but it is specifically provided that either the co-pilot or other member of the crew may serve also as radio operator The interpretations call for a steward or cabin attendant in planes carrying more than eight passengers, but his role may be doubled with that of the co-pilot.

Propose Definite Overhaul Periods

Especially important is the limitation proposed on the accumulation of time and of mileage pay by one individual for "A first pilot or co-pilot shall not be on flight duty more than a scheduled eight hours in any one day nor more than thirty hours per week In the event flight duty exceeds six hours in any one day at least a twenty-four hour period shall intervene before additional flight duty is assumed."

One of the most striking of the proposed provisions and undoubtedly that which will arouse the most controversy prescribes definite overhaul periods The regulations themselves as contained in Bulletin 7 E gave warning that fixed periods would be determined by the Secretary of Commerce Now it is to be done The interpretation is specific "Aircraft engines shall have a complete overhauling and replacement of worn parts at least once in each three hundred hours"

Airway provisions contain nothing extraordinary or surprising the severest and most definite requirement proposed being that 'Intermediate fields properly marked and of adequate size, shall be at intervals of not to exceed fifty miles unless terrain conditions make it impractical or impossible" Clearance cards in substantially uniform form are called for so that there may be a record of all operation and of who approved them All flying under these interpretations will be subject to certain definite uniform instructions including

1 Strict observance of Air Traffic Rules.
2 Utilize the full effective landing and take-off areas of all fields
3 After all other preparations have been made and the aircraft has taxied to that point on the field from which it is to begin the take-off run the plane shall be stopped, engine temperatures shall be checked, ignition tested and the individual engines tested at full throttle.
4 So far as practicable immediately after take-off, the direction of flight shall not be altered until at least a minimum altitude of 500 feet shall have been attained
5 Avoid all maneuvers not necessary to the orderly progress of the scheduled flight.
6 Aircraft shall not deviate from the prescribed course except when special circumstances render a departure necessary to avoid immediate danger or when such departure is required because of stress of weather conditions or other unavoidable causes provided however that no deviation shall be made from the air traffic rules pertaining to minimum altitudes of flight because of stress of weather conditions.
7 The authorized pilot or pilots shall be the sole manipulators of the controls of the aircraft while in flight, and passengers shall at no time be permitted to enter the pilot's compartment except however a duly authorized airline inspector of the Department of Commerce may in furtherance of his official duty enter the pilot's compartment if and when it is deemed necessary or advisable. In the event the crew consists of more than one pilot none shall remain away from his proper station for unnecessary periods of time.

The foregoing shall be made conveniently available for the observance of passengers This may be accomplished either by suitable poster or posters in the cabin or be made a conspicuous part of any folders or literature which may be distributed to the passengers individually

George S Gardner, former supervisor of No 1 New York has been appointed assistant chief of the inspection section to give particular attention to the inspection of the transport lines Applications for certificates have already been received from most of the large passenger-carrying companies and four inspectors are now out making cursory survey of the various airlines of the nation

Temporary letters of authority under which companies may operate pending inspection and issuance of the certificate to operate will be granted upon application for the certificate, provided the application shows a reasonable operation

The principle points which the inspectors will stress are the suitability of the equipment for the particular run, the qualifications of the pilot personnel, for the particular run the completeness of the weather reporting system, and the sufficiency of emergency fields along the route

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Announce Boeing School Winners

OAKLAND (CALIF)—Ralph J Moore, of Leland Standford Jr and University of California, student, won first place in a nationwide aviation scholarship contest conducted by the Boeing School of Aeronautics at Oakland Airport Other scholarship winners were L H Speelman of Mt Union College, Canton, Ohio, Charles W Sharp of the University of Nebraska, Lincoln, Neb , and R M Harris of the University of Washington, Seattle, Wash More than 170 colleges and universities were represented in the contest. Judging of the contest took place in Omaha, Neb The judges were Dr Baldwin M Wood, professor of aerodynamics at the University of California; Major William A Beban, professor of aeronautical engineering, Iowa State College, and William B Stout, Detroit aircraft manufacturer

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Martin Offers Parts, Accessories

BALTIMORE—The Glenn L Martin Co has announced its readiness to manufacture airplane parts and accessories for other plane manufacturers and, in fact is at present engaged in the production of 189 gasoline tanks for the use of another firm This represents a departure from the company's hitherto unbroken policy of manufacturing parts and accessories solely for its own use Government specifications will be followed in the manufacture of all parts built for other companies, it is announced, and such parts will be subject to the usual Navy vibration and pressure tests.

Plaintiff Wins Aero Policy Case

Mining Firm Gets Award For Loss of Insured Plane

MONTREAL (QUE)—Of special interest to plane owners and aero insurance companies because of the extenuating circumstances involved in the case, is the decision made here recently by Superior Court Justice Charles Duclos favoring the plaintiff in a plane insurance suit.

The Obalski Chibougamou Mining Co was owner of a Wright 300 powered Travel Air which was lost in LacQuinet July 13, 1929, when the craft hit a rough air area, thus causing the pilot to lose control Except for the engine, valued at $3,500 nothing was salvageable.

On June 4, 1929, the mining firm had insured the Travel Air with the Aero Insurance Co for $19,650 for the period of one year said policy requiring a premium of $3,487 88.

Plane Lost on Test Flight

Though purchased in the United States and imported into the Dominion as a landplane, the Obalski concern had had the machine converted into a seaplane by the Canadian Vickers Co

It was after the change in type had been made and the craft been put through its initial test flight that the trial flight on which the accident occurred took place. The machine was flown by a licensed pilot, accompanied by a mechanic and a third person

When the Obalski Chibougamou Mining Co presented its claim to the insurance company, the latter would not recognize it thus causing the former to take court action in seeking $18,695, of which $14,403 40 was to be paid the Industrial Acceptance Corp, holding a lien on the plane to that amount.

As settled by Justice Duclos, the insurance firm is now required to pay the mining firm $14 185 to be turned over to the Industrial Acceptance Corp

Accepts U. S. Government Approval

In presenting its side of the case, the defendant contended that the plane was not airworthy and that, having been converted from a landplane into a seaplane, the rudder was too small and although a larger rudder had been ordered it had not been used

The insurance company also referred to a clause in the policy in which the plaintiff declared that "all Federal Government or state government requirements for civil aviation are now and will be continuously complied with and furthermore, the defendant asserted that the plaintiff had been notified by the Department of National Defence is withdrawn use of the plane until it had undergone further government inspection.

In presenting his verdict, Justice Duclos said

"The defendant has failed to prove that the plane was not airworthy This plane having been built in the United States had its certificate of airworthiness from the authorities in Washington, which certificate is accepted as sufficient by the Department of National Defence Air Service Branch, in Canada (This decision is based upon the reciprocal agreement covering international flying entered into last November by Canada and the United States—Ed.)

Answering the charge concerning the rudder the Justice said evidence presented showed it was of sufficient size and of a standard type. Only when taking off from or alighting on water was a larger rudder needed it was stated

Rebutting other contentions presented by the defendant Justice Duclos said that the flight in question was not of a commercial nature and no passengers or cargo were being carried.

Therefore, prior registration was not necessary and, even if such registration had been required, the Justice declared that failure to obtain the same would have had no bearing on the mishap

Under clause 6A of the general conditions attached to the policy continued Justice Duclos 'it is provided that the defendant is not liable for loss or damage in respect of which any government or state regulation for civil aviation is not complied with or while used for any illegal purpose

Interprets Policy to Favor Plaintiff

The only fair interpretation of this clause is that it restricts the warranty stipulated in clause 17 of the said policy and makes it applicable only in the case in which the loss or damage has arisen by reason of a failure to comply with any government regulations and in this case it cannot in any way be pretended that the loss or damage arose in respect of any regulations of civil aviation

"This policy is the defendant's own document, drawn by itself and in case of doubt must be interpreted in favor of the insured and against the defendant. In fact, this policy is drawn with such care and is surrounded with so many conditions and exceptions, that if it were interpreted as the defendant seeks to do it is doubtful if any claim ever could be successfully made thereunder

The Justice stated there was no evidence to support the defendant's assertion that the flight had been forbidden by government authorities.

On the other hand it was pointed out that before the trip was started the mining firm had wired the insurance company's representative in Montreal asking if the policy covered such a flight, and was told that it did not exclude the trial flight so long as fuels employed were of standard design And such fuels were used on the plane in the flight in question

Seek Lower Instruction Rates

DALLAS—At a recent meeting here of Central West members of the 99 Club, women pilots' organization, a campaign was planned to seek reduced flying instruction rates, with committee reports to be heard at the coming meeting in Chicago during the National Air Races. Miss LaRene, American Eagle firm demonstration pilot, presided. 'The 99 Club proposes to interest more women in aviation," said Miss LaRene, "but the girls feel present flight instruction rates are entirely too high to create much interest in flying among women."

United Acquires Control of Varney

Holds 57 per Cent of Stock Exchanged on 2-for-1 Basis

NEW YORK—Again adding to its mail and passenger line facilities, United Aircraft & Transport Corp has acquired control of Varney Air Lines with acquisition of 57 per cent of the 10,000 shares of stock outstanding in that firm.

The controlling interest was obtained from Walter T Varney and Louis H Mueller, chairman of the board and president of the company, respectively, at the rate of two shares of Varney for one of United. If the offer, to be shortly made by United to the remaining Varney stockholders of exhanging their stock on the same basis, is accepted it will necessitate the issuance of an additional 50 000 shares of United providing all Varney shares are turned in

Varney operates mail and passenger routes from Salt Lake City to Pasco (Wash), Pasco to Washington, and Pasco to Seattle via Portland. The first of these lines was started on April 6, 1926 and is flown twice daily, while the second and third were inaugurated Sept 15, 1929, and are flown once a day

Varney Increases Steady

The bulk of the company's revenue has come from its mail contracts and new route certificates recently obtained from the Post Office Department will involve a total flying mileage in excess of 2 000 per day

Varney has shown steady increases in air mail poundage during the current year, volume increasing from 24,857 lb in January to 39 436 in April, while revenues from transportation of mail increased from $53 410 to $71,211

The main base of Varney's operations is Salt Lake City, an important terminal on United's transcontinental route, and acquisition of this company will give United an important feeder line. No change is contemplated in the management of the company

Present Boeing subsidiaries carry mail from New York to Chicago, from there to Salt Lake City and San Francisco and up the Pacific Coast from Los Angeles to Seattle These lines are operated by National Air Transport Boeing Air Transport, and Pacific Air Transport. Operating economies are expected from the Varney addition

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Government Orders to Switlik

TRENTON (N J)—The Switlik Parachute & Equipment Co has contracted to supply 4,600 pack assemblies to the Air Corps at Dayton The pack cover, a feature of the Safety Chute pack on which patents have recently been granted to Switlik is round and in one piece and acts as a pilot chute when the release is pulled

Exports for 1930 Only Slightly Lower

Estimated 11% Under 1929, 5-Mos. Comparisons Reveal

WASHINGTON — Though month by month this year's aero exports have generally been lower than during the same period last year, data now issued by Leighton W. Rogers, Chief Aeronautics Division, tends to dispel any pessimism regarding this phase of the industry and its probable outcome for 1930.

The aeronautic export trade from the United States was so large during the year 1929, in comparison with previous years,' declares Mr. Rogers, "that it was thought by many that during that peak year a virtual saturation point would have been reached for aircraft and kindred products in certain of our best markets for these items.

"Instead, while domestic sales of aircraft for the current year are considerably under those for the first five months of last year exports from January to May inclusive were but 11 per cent under those for the same period of 1929. From all indications, this trade will be maintained if not increased this year, since foreign markets heretofore uncultivated are being opened up by means of demonstration missions, more thorough attention to overseas requirements and the inspection system of the Aeronautics Branch of the Department of Commerce which is now available for all aircraft before exportation.

"It may be the general impression from viewing the current favorable position in exports, as compared with last year that lowered prices of American aircraft are responsible. That this is not completely true is indicated by the fact that the average unit value of aircraft exported during the first five months of 1930 was $15,200, as compared with a unit valuation of $16,650 for the analogous period of 1929.

May This Year Record Month

"Total exports of aircraft engines and parts exclusive of tires, during the first five months of 1930 were valued at $3,591,357.[illegible] as compared with $4,000,071 worth during the same period of 1929. May, 1930, which helped swell the total for this year, was the record month for all time with aeronautic exports valued at $1,391,159. The previous peak month was June of 1929 when exports of these items amounted to $1,174,721. During June of last year, but 49 complete aircraft valued at $955,879 were included as compared with 58 valued at $867,918 during May of this year."

Canada, China, Peru, Japan and Argentina were the leading markets for aircraft indicating a diversification in markets which factor is partly responsible for the favorable position in this trade. Of the complete aircraft exported during the period from January to May inclusive of this year, 61 per cent went to Latin American countries, and 8% per cent to the Far East. European countries did not figure at all as purchasers of complete aircraft from the United States although engines and parts shipments to Europe remained important.

Some of the exports of complete aircraft were for operation on the international airlines in South and Central America which are owned by United States capital. It is estimated that there are over 100 American aircraft in operation over the Latin American lines of which probably 80 per cent show up in the export statistics.

Foreign operation of these aircraft has naturally a salutary bearing on the sale of aircraft to Governments and private individuals of the countries to the south, only four of which are not on the airway maps of United States operators.

Six markets which made no purchases of United States aircraft engines during the first five months of 1929 made purchases during the same period of this year. These included Java and Madura, China, Bolivia, Colombia, and Australia. Germany remained the principal market in point of value with takings of fifteen engines valued at over $100,000. Peru absorbed 21 engines at a slightly lower total valuation. Although the first five months figures for 1929 and 1930 do not show regular exports to Europe other than Germany recent reports indicate that American engines are to be used on locally fabricated planes on several of the European airlines.

Shipments of aircraft parts and accessories from the United States during the period under review not only increased $83,440 over the $948,610 worth exported during the same period of last year, but went to countries such as Surinam, Java and Madura, Yugoslavia and the Union of South Africa, which were not included as countries of destination before.

Canada remained the best market for new and replacement parts. Soviet Russia in Europe supplanted China as second in importance although the last mentioned held a prominent place in exports with shipments of parts valued at over $40,000 during the first five months of 1930.

In connection with the recently available statistics of United States exports of aeronautic products it is of importance to consider those of European countries. France, the principal European exporter of aircraft shipped during the first quarter of the current year $1,582,820 worth of complete aircraft.

This valuation is compared with $9 aircraft valued at $885,700 from the United States during the first quarter of 1930. The United Kingdom during the first four months of 1930 exported approximately $21,538 worth of all aeronautic equipment including engines and parts. United States shipments in these items for the same period total $3,200,108.

During the first four months of 1930 Germany exported 24 complete heavier-than-aircraft valued at $206,100, as compared with 74 from the United States at $1,175,000. Countries of destination are not available for the British and German exports during the early months of 1930 nor are units for France.

Planes Exported

Countries of Destination	First Five mos. 1929 No.	First Five mos. 1929 Amount	First Five mos. 1930 No.	First Five mos. 1930 Amount
Canada	11	$314,119	12	$446,091
China	1	14,911	11	367,007
Peru	1	11,079	20	111,080
Japan	6	91,671	8	191,261
Argentina	10	197,163	11	111,112
Mexico	50	1,012,074	11	141,127
Java and Madura			7	140,000
Chile	22	418,710	1	100,200
Colombia			2	11,110
Brazil			1	10,000
United Kingdom	1	12,200		
Guatemala	4	16,000		
Philippine Islands	5	45,217		

Engines Exported

Countries of Destination	First Five mos. 1929 No.	First Five mos. 1929 Amount	First Five mos. 1930 No.	First Five mos. 1930 Amount
Germany	45	$108,244	15	$109,192
Peru	1	16,097	21	107,172
Panama	1	1,100	11	67,771
Netherlands	1	11,100	11	48,495
Java and Madura			5	41,000
China			7	40,110
Canada	12	18,012	19	26,112
Argentina	3	11,700	5	26,010
Trinidad Tobago			3	22,444
Japan	22	69,137	5	20,654
Belgium	1	12,000	1	20,271
Brazil			2	14,982
Other British W. Ind.			2	9,000
Bolivia			1	7,610
Colombia	3	26,021	1	7,260
Union of S. Africa			1	6,890
Guatemala	3	2,110	2	6,116
Mexico	7	26,018	2	5,500
Honduras			2	5,127
United Kingdom	1	9,000	1	4,462
Australia			1	1,400
Poland and Danzig	21	62,195		
Philippine Islands	2	26,120		
Switzerland	1	19,171		
Soviet Russia in Europe	1	14,546		
Chile	4	18,998		
France	6	19,208		
Italy	3	1,660		
New Zealand	1	111		
Sweden	3	1,810		

Parts Exported

Countries of Destination	First Five mos. 1929	First Five mos. 1930
Canada	$359,772	$261,012
Soviet Russia in Europe	46,747	144,982
Argentina	26,230	78,101
Brazil	3,442	61,162
Chile	9,511	47,641
Peru	71,660	44,727
China	81,146	40,120
Panama	9,475	22,162
Surinam		21,154
Java and Madura		17,011
Germany	46,741	11,231
Colombia	16,380	10,871
Belgium		10,607
Trinidad-Tobago		10,171
Yugoslavia-Albania		9,711
Other French So. Africa		6,017
Union of South Africa		5,811
Poland and Danzig	9,792	1,611
France	12,126	2,516
Haiti		2,141
Spain		2,101
Uruguay		2,042
Virgin Islands—U. S.		1,516
Venezuela		1,477
Costa Rica		1,111
Dominican Republic	22	1,019
Salvador		1,028
Hong Kong	5,580	619
Switzerland		584
Bolivia		111
Siam		340
Bermudas	4,171	
Finland	4,050	
Norway	1,500	
French Oceania	800	
Sweden	112	
Guatemala	260	
Turkey	392	
Other countries	2,217	

Gain Reported By C-W Service

Passenger Record for 1930 Already Near Total for 1929

NEW YORK—Curtiss-Wright Flying Service believes that business is looking up and, to back up this contention, reports that its charter and short-hop planes have carried just about as many persons in the first 6 months of this year as in all months of 1929.

That is a total of 83,265 persons were carried between January 1 and July 1 as compared with 86,589 during 1929. These are rated as pay passengers, too, and the fare per person on the short hop ranges from $1.50 to $10 and $15, depending on the length of the flight.

The patronage increases have been steady, as follows: January-1,995; February-3,178; March-9,653; April-12,083; May-23,279; June 33,077.

There are 30 year-round land bases in the chain and the record of a few typical individual examples by months are:

Boston—104, 164, 174, 396, 1,349 and 453.

Chicago—99, 538, 1,207, 613, 4,989, 9,913.

Los Angeles—226, 1,548, 4,506, 2,840, 3,643, and 2,851.

Valley Stream (N. Y.)—179, 294, 698, 1,376, 3,667, 3,918.

Most of this patronage has been on the short-hop business. The proportion between the short hop and the charter work is shown by a further breakdown of the June figures for the bases quoted above. Boston carried 360 on short hops and 93 on charter trips. Chicago carried 9,885 and 28 respectively. Los Angeles carried 2,838 and 23, and Valley Stream carried 3,835 and 83.

Carry 38,443 lb. of Newspapers

Valley Stream reports for June 297 hr. of flying on scheduled airline trips. Two hundred and thirty nine of these hours were flown on a newspaper delivery service contracted for by a local paper to cover Albany, Burlington, Pittsburg and Montreal during the summer season. Since this daily except Suday service was started 32,243 lb. of newspapers have been carried. The plane takes off about dawn for the northbound trip.

School, photographic and crop-dusting activities have all shown steady increases, as indicated by the attached table. This shows also the hours flown on short hops and cross-country flights as well as the patronage. The scheduled airline figures are for such services as that between Rockland, Me., and Vinal Haven; Boston and Martha's Vineyard, etc. Some of these are seasonal.

The outstanding operation was the carrying of 16,589 pay persons passengers at Chicago between June 22 and July 6. This was due to the interest surrounding the Hunter refueling flight.

		January	February	March	April	May	June
Passenger hops	Hours	167	223	420	196	890	1,019
	Passengers	1,641	2,817	9,111	11,101	22,210	12,066
Cross-country	Hours	214	375	438	126	984	818
	Passengers	311	361	477	414	508	807
School	Hours	4,710	1,704	5,599	8,740	6,871	6,489
	Students	1,200	1,200	1,200	1,200	1,200	1,200
Photo	Hours	42	59	90	172	191	126
Crop dusting	Hours	30	27	62	91	153	120
Scheduled airlines	Hours	13		41	26	50	237
	Passengers	43		45	46	475	404

Totals

	Passengers	Hours		Passengers	Hours
January	3,191	5,196	April	13,285	8,113
February	4,178	6,320	May	24,479	6,717
March	10,811	6,650	June	14,277	8,919

United Unit Officers Named

HARTFORD (CONN.)—The newly-formed United Aircraft & Transport Corp of Connecticut (THE AVIATION NEWS, July 12, p. 15) announces its officers and board of directors as follows: President, Frederick Rentschler; Chairman of the Board, William E. Boeing; Vice-President, Chance Vought; Philip G. Johnson, and George S. Wheat; Secretary and Treasurer, Charles W. Deeds; Assistant Secretary and Treasurer, Joseph F. McCarthy; Assistant Treasurer, Carroll L. Gault; Directors, Mr. Boeing, Mr. Rentschler, Mr. Vought, Mr. Deeds, Mr. McCarthy, and Frederick W. Jackson, and Edward A. Deeds.

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Whitman Firm Offers Cotton Parachute Fabric

NEW YORK—William Whitman Co. announces the introduction of Nashawena parachute fabric, made entirely of cotton. The product was developed from sample pieces which were studied for thread construction particularly as to the yarn size and for the twist, weave, and thread count in relation to the breaking strength, tearing resistance and weight. Data was also collected from fabrics now being used in balloons.

Tests on this parachute material were conducted by a parachute company, a number of packs having been made up and tried out under varying conditions. Dummies weighing 815 lb. were used in the course of the experiments, the parachutes landing these objects safely with a minimum of shock.

Material now marketed is made up of a special yarn and thread count, thus providing for maximum strength while at the same time observing weight limits. Eight hundred pieces of this fabric have been produced.

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Waco Sells 26 F's in Month

TROY (OHIO)—Waco Aircraft Co. reports the sale of 26 model F Wacos for the month of June.

Fireproof Mail Bag Accepted by N.A.T.

Johns-Manville Product Successful in Chicago Tests

CHICAGO — Fireproof mail pouches developed by Johns Manville Corp. will be placed in service soon by National Air Transport. It is expected that other air mail carriers will follow suit, and that the volume of air mail business obtained from banks and other organizations now utilizing ordinary mail in shipping valuable articles will be increased tremendously. A test of the new bag was successfully conducted last week at Chicago Municipal Airport before a group of N.A.T. officials, representatives of the Railway Express Agency, nine banking firms, eight business houses and the Chicago Association of Commerce.

Packages and letters prepared by those witnessing the test were placed in one of the new pouches. The bag was closed, and aviation gasoline and lubricating oil were poured over the outside. Scrap wood and doped plane fabric were placed around the pouch, and the pile ignited. The blaze lasted for about 15 min. When the pouch was opened, it was found that none of the papers placed inside were charred in the least. Even the sealing wax with which some of the envelopes had been sealed was unaffected, it is said.

Use Canvas over Asbestos

The fireproof mail bag is cylindrical in shape. It can be made in any size desired, but the outside diameter of the one with which the test was conducted is 13½ in. It is 30 in. high. The insulated compartment inside has a diameter of 12 in. and is 18 in. high. Because of its wearing qualities and for the purpose of rendering the bag as nearly air tight as possible, the outside is of special canvas. In a severe fire this canvas will burn off. Under the canvas is a woven asbestos cloth, containing about 3 per cent cotton.

The mail compartment is constructed of asbestos fiber, which is felted so that it will hold its shape. Inside the fiber

(Concluded on Page 17)

Race Officials Reply to Protests

Say But One Complaint Made to Them in Writing

CHICAGO—Though a number of complaints are understood to have been made criticizing the lack of events for high powered craft in the National Air Races, evidently they have not been sent to the N.A.R contest committee.

In a joint statement issued by Maj R W Schroeder, director of contests for the Races, and Maj Luke Christopher, representing the National Aeronautic Association, the situation was described as follows

"Contrary to published reports widespread satisfaction exists over the program for the National Air Races this year Only one formal protest in writing has been received by the contest committee of the National Air Races

Recognizes "Great Majority"

"The racing program was arranged to give complete satisfaction to every possible competitor We have provided events in every specific power category that time would permit Those in charge of the contest grouped the power classifications to give every pilot an opportunity to compete. Accordingly, eight classes ranging from 110 cu in piston displacement to unlimited power were provided, which takes care of all engines manufactured to date.

"The program is fair to entrants with planes in all power classes The committee in charge recognized the fact that the majority of privately owned airplanes are powered by engines of 800 cu in displacement or less This great majority of flyers are recognized in the program according to their representation in the flying world.

"The higher-powered planes are provided for principally in the non stop Derby and the Thompson Trophy race One third of all prize money will go to such entrants. This is recognition of the greater cost of high powered planes, despite the fact that only one-eighth of the approved type engines manufactured are in that category

Verbal Expressions on Eastern Derby

"As regards the women's derbies nothing but hearty approval has met the plans for the western derby In the East a few girl fliers piloting planes of high power have expressed dissatisfaction verbally because the eastern women's derby is limited to planes of 500 cu in displacement. They naturally dislike the idea of "going back to kindergarten," although a race of low-powered planes is no less a test of piloting skill.

"Last year all planes piloted by women were grouped in one classification. We believe we have recognized the increase in girl's flying activity in the intervening year by providing two classes this year. Provision for a third higher power class must logically wait until next year

"There has been no quibbling of any sort from entrants in the five men's derbies We have offered to provide a special speed race for girl fliers in an unlimited power classification so that women flying higher-powered planes will have an important place in the meet.

"The approved racing program was drawn up only after due consideration and conferences with manufacturers and pilots, and we feel that it is eminently fair, giving opportunity to every licensed pilot to enter some event."

Value of a Flight Is Sanction Basis

WASHINGTON — Is the 'new idea' flight Capt J. Doe plans likely to be beneficial to aeronautics?

If the Aeronautics Branch is satisfied that it is and that the equipment is airworthy and the personnel capable, then a Department of Commerce sanction will probably be given, asserts Gilbert C. Budwig, director of air regulations

"We are not against flights just because risks must be taken,' Mr Budwig said, "but we do demand that it be shown they can serve some useful purpose"

The point arose following the recent denial of sanction for an endurance flight in which crews were to be changed in the air

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Glider Bulletin Issued

WASHINGTON—Offered with the aim of encouraging the development of gliding in the United States, not only as a sporting and recreational activity, but as a medium for furthering interest in all phases of aeronautics," the Aeronautics Branch has issued a pamphlet designated as Aeronautics Bulletin No 22 entitled "Gliders and Gliding." In general, non-technical terms, the bulletin briefly treats the history and purpose of gliding, types of gliders methods of instruction, safety principles and the requirements for licensing of gliders and glider pilots. Copies of the bulletin may be obtained free upon request to the Aeronautics Branch

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Goodyear "Puritan" Enlarged

AKRON (OHIO)—Rebuilding of the Goodyear Tire & Rubber Co airship "Puritan" damaged last winter, has added 14.000 cu.ft to its helium capacity with the new bag, which holds 100.000 cu ft of gas

Select Starting Points for Derbies

Plan Illinois Air Tour To End at Chicago, Aug. 23

CHICAGO—While final plans are not yet made, starting points have been named for the seven derbies which will end here during the week of the National Air Races The arrival of the first of these, the eastern women's derby, is scheduled to inaugurate the race program In order to avoid confusion in the minds of the spectators, a final control point will be designated near here, such as Elgin or Aurora so that contestants will arrive at Curtiss Chicago Airport in the order of their standing in the derby as a whole, instead of in order of last lap arrival

The eastern women's air derby, entries for which are limited to planes of 500 cu in piston displacement, will start from Washington, D C. No exact itinerary has yet been fixed, but the pilots will probably fly south to Atlanta, westward skirting the Gulf of Mexico, and north up the Mississippi Valley. The western women's derby in which planes with engines up to 800 cu in piston displacement may be entered, will start from Long Beach, Calif Control points have been tentatively named as follows San Diego, Phoenix, Tucson, Douglas, El Paso, Roswell, Lubbock, Amarillo, Wichita Kansas City, St Joseph Des Moines, Madison Elgin. The total distance over this route is 2,365 mi This derby will be under the direction of C. F Lienesch, engineer for Union Oil Co Starting points for the five men's derbies itineraries for which have not been chosen, are as follows:

Non-stop derby unlimited class Los Angeles

Western derby for planes up to 500 cu in. piston displacement Seattle Wash.

Eastern derby for planes up to 500 cu in piston displacement Miami Fla.

Eastern derby for planes up to 800 cu.in piston displacement Hartford, Conn or Boston Mass

Western derby for planes up to 800 cu.in. piston displacement El Paso Tex.

In an effort to stimulate interest in the National Air Races throughout the state the Illinois Chamber of Commerce is planning an air tour to start from Curtiss Chicago Airport Aug. 20 The planes entered will make stops at twenty or more towns and cities before returning to the port Aug 23, the first day of the races Seventeen planes have entered thus far, according to C L Hardin, manager of the aviation department of the Chamber, although no prizes are offered

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Fort Erie Fleet Plant at Work

BUFFALO (N Y)—Construction of the Canadian branch of Fleet Aircraft Ltd at Fort Erie Ont., across the Niagara River is nearing completion and work has been started on the first four Fleet training planes

F. A. I. Homologates Two World Records

New International Marks Are Also Given Recognition

PARIS—World Records for duration and distance in a closed circuit, made May 30-June 2 by Umberto Maddalena and Fausto Cecconi, have been homologated by the F A I These are the first World Records to be approved under the revised classifications adopted at the recent annual meeting The official figures are duration in closed circuit, 67 hr 13 min, distance in closed circuit 8,188 800 km. (5,050 mi) The records were made on a course from Montecelio to Stazione and Ladispoli with a Savoia-Marchetti S 64bis monoplane using Fiat A.22 T 550 hp engine International Records approved at the same time are as follows

Class C (Landplanes)
Third Category

Altitude 8 142 m (26 750 ft.) by Woldemer Voigt Darmstadt D 18 100 hp. Armstrong Siddeley Genet Major engine Darmstadt Germany May 23

Duration on closed circuit 22 hr 24 min by Mile Maryse Bastie Klemm 40 hp Salmson engine Le Bourget June 9 10

Class C2 (Seaplanes)

Airline distance 3 172 280 km (1,058 mi) by Jean Mermoz, Dabry and Gimie Latecoere 28 600 hp Hispano-Suiza engine St. Louis, Senegal to Natal Brazil May 12-15

Light Seaplanes—First Category

Altitude 4 014 m. (16,200 ft.), by W Zimmermann and Schlazinger Junkers J 50W 85 hp. Armstrong Siddeley Genet engine Dessau Germany June 4

Duration on closed circuit 8 hr 27 min.

Distance on closed circuit 900 128 km (500 mi)

Speed for 100 km 164 560 km/hr (102 m p h) all three by A Grundke and G Pfeiffer Junkers J 50W 85 hp Armstrong Siddeley Genet engine Dessau Germany June 6

Light Seaplanes—Fourth Category

Altitude 5 652 m (18,600 ft) by W Zimmermann Junkers J 50W 85 hp. Armstrong Siddeley Genet Dessau Germany June 4

Expect R-100 to Start July 28

MONTREAL (QUE.)—The British Air Ministry has cabled the St Hubert Airport to know if everything is in readiness for the arrival of the R-100 This is taken by the local authorities to mean that the dirigible will leave for St Hubert on July 28 weather conditions permitting, and will reach here on August 1

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Detroyat Wins Michelin Cup

PARIS—Michel Detroyat was awarded the Michelin Trophy for this year when other competitors failed to finish He covered the 1 760 mi course at an average speed of 124 m p h despite fourteen prescribed landings The course was as follows Le Bourget-Rheims-Strasbourg-Dijon-Clermont-Ferrand-Lyon Montpellier Perpignan Toulouse-Pau Bordeaux Angers-Avord-Tours-Le Bourget The elapsed time was 13 hr 54 min 58 sec Detroyat used a special Morane-Saulnier monoplane with 230 hp Salmson engine Marcel Haegelen in a Hanriot 410 monoplane with 230 hp. Lorraine engine, had covered the course from Dijon to Rheims in better time but at the latter field the plane turned over on landing due to very high grass Paillard in a Bernard 270 monoplane with 230 hp Gnome-Rhone engine had to abandon the attempt due to a broken oil line His time was slower, so far as he went June 30 was the closing date for competitors to cover the course

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Four Stinsons to Aero Branch

WAYNE (MICH.)—Within the past month four Stinson Juniors have been delivered to the Aeronautics Branch for the use of inspectors Three are Whirlwind 240 powered, while the fourth employs a 210-hp Lycoming

Record-Holding Junkers Junior Seaplane

THIS seaplane version of the well known Junkers J.50 Junior all-metal monoplane, using an 85 hp Armstrong Siddeley Genet Engine, has now been officially credited with records for altitude, duration, distance, and speed.

League of Nations Sponsors Air Study

Committee of Experts Meet July 7-12 at Geneva

GENEVA — After adopting a program for study in the field of international air transportation the League of Nations committee of experts adjourned July 12 On the opening day July 7 a statement by Col. Charles A Lindberg was read and statements on the same subject were received from Dr Eckener and Gen Italo Balbo Italian Air Minister These will be published as an introduction to a volume containing monographs by Henri Bouche on the economic aspect of aviation and by Brig Gen P R C Groves on the relation of civil to military aviation (see p 20) The most important points in the study program adopted by the committee are as follows

1 Extension and systematization of combined air and rail ship or motor transport.

2 Preparation of a general guide for combined transport throughout the world

3 Simplification of postal air rates.

4 Establishment of an international plan of urgently needed air routes, with program of equipping them for day and night flying

5 Simplification of air transport rates

6 Selection of permanent routes to constitute a principal system

7 Liberalization of regulations for admission of foreign aircraft into national sections of regular routes

8 Publication of a general time table

9 Creation of an information center on international civil aviation.

10 Removal of restrictions calling for purchase of domestic planes by subsidized airlines.

11 Creation of an international fund to finance these studies

The official name of the conference was the Committee on Co-operation Between Civil Aviation Undertakings Its members were appointed by the chairman of the League Advisory Committee on Transit John J Ide, technical assistant in Europe for the National Advisory Committee for Aeronautics was official U S observer Representatives were named from Great Britain France Germany Italy Japan the Netherlands Poland Spain Switzerland and Yugoslavia and there were observers from Argentina Brazil and U S S R

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Test Plane With Fiat Diesel Engine

ROME—Renato Donati flew from Turin to this city June 24 in a Fiat A 304 plane with Fiat AN 1 Diesel type engine This engine is an adaptation of the company's A 12bis gasoline engine and has 5 52x7 09 in bore and stroke It is said to develop 180 hp at 1 600 r p m The cylinders are steel with welded water jackets mounted on an aluminum crankcase There are two overhead camshafts operating four valves per cylinder Two fuel pumps feed three cylinders each

Twenty-One Enter All-America Derby

MARYSVILLE (MICH.)—Twenty-one planes will fly in the All-America Derby, sponsored by the American Cirrus Engines, Inc., according to the latest entry list. The race will start from Detroit on July 21, weather permitting. Three of the original competitors have withdrawn—Jack Barstow, San Diego, on account of injury and the Swallow Airplane Co., Wichita and Ben E. Brown, Lawrence, Kan., because it was not possible to have their planes ready in time.

Approximately $40,000 is being offered in prizes for the race. American Cirrus Engines, Inc., is offering a first prize of $15,000, second $7,000 and third $3,000. Best flying time between control points will be the basis of award.

Outside of the $500 offered by the AC Spark Plug Co., the additional cash prizes are being put up by cities where the planes will stop. Detroit Board of Commerce will distribute $5,000 among pilots other than the first three winners, making the best time, while New York City is offering $1,000 in lap money. Cincinnati $500, Little Rock $1,500, Houston $1,000, San Angelo $300, Douglas $300, Los Angeles $1,000, and Ogden $1,000.

Following several changes the final itinerary of the derby is announced as follows: Detroit, Buffalo, New York City, Cincinnati, Little Rock, Houston, San Angelo (Tex.), Douglas (Ariz.), Los Angeles, Ogden (Utah), Lincoln (Neb.), Chicago, Detroit. The route will be flown in twelve flying days.

The only restriction in the race is that all planes are to be powered with American Cirrus engines. Maj. Luke Christopher, secretary of the N.A.A., and Capt. Frank Hawks will act as referees. Other members of the race committee are William B. Mayo, chief engineer at Ford and director of Stout Air Lines, and Phelps Newberry, a director of the Buhl Aircraft Corp.

Recent additions to the list of entries follow. [See AVIATION, July 5, for Nos. 1-16 inc.]

No. 17—J. B. Wedell, New Orleans—Flying a Wedell-Williams plane
No. 18—R. A. Hyder, Detroit—Flying a plane of his own design
No. 19—Samuel Taubman, Akron—Flying a Taubman Monoplane.
No. 20—Cecil Coffrin, Brooklyn—Flying a Great Lakes Speedster
No. 21—John Kruitschmitt, San Mateo, Calif.—Flying a DeHavilland Moth.
No. 22—H. C. Mummert, Hammondsport, N. Y.—Flying a Mercury
No. 23—E. K. Todd, Pueblo—Flying an Alexander Eaglet.
No. 24—Granville Bros., Springfield, Mass.—Entering a Granville Plane

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Northwest Tour to Start July 28

PORTLAND (ORE.)—So far 24 cities have agreed to back the first Northwest Air Tour which is scheduled to get underway on July 28 for a ten-day trip through Oregon, Washington, and Idaho. It is expected 50 craft will participate.

First Martin PM-1 Completed

BALTIMORE (MD.)—Completion of the first PM-1 flying boat of an order of 55 being prepared for the Navy is announced by the Glenn L. Martin Co. The craft, powered with 525 hp. Cyclones, has a wing spread of 72 ft. 10 in., and is designed to carry a crew of five, armament, and bombs. Flight tests of the machine built at the new Middle River plant, have been made and delivery will be made immediately at Anacostia, D. C. It is stated that the Martin company at present has more than $4,000,000 worth of business on its books.

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Aero Branch Amends Approved School Rules

WASHINGTON — Approved civilian schools are now under no obligation to graduate students within a limited period of time and can accept students on an hourly or part time basis without graduating them, states Gilbert G. Budwig, Director of Air Regulation.

The reason for the changes is given by Director Budwig as follows:

"In light of the excellent results we have obtained from approved schools and in line with the Departmental policy of granting concessions when justifiable we feel that material assistance can be given approved schools by permitting certain waivers of the School Regulations.

"Students who are graduated must in all cases have taken the entire course as laid down by the Regulations and nine out of ten of these graduates must successfully accomplish the examinations involved for the grades of licenses for which they apply.

Students who do not take a full course are not entitled to make application for license unless they have had the minimum solo experience as provided in the Air Commerce Regulations.

"The parts of the School Regulations which are being waived have required that the entire course both ground and flight be completed in a maximum time of four months for private school, six months for limited commercial school and eighteen months for transport school. They required that sixty-six and two-thirds per cent of the students accepted for instruction graduate from the course for which they were enrolled."

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Seek to Band Independents

NEW YORK—Formation is announced here of the National Aircraft Sales Corp., an organization to act as a national distributing agency for independent plane manufacturers. Peter C. Cortelyou is president of the group which includes among its board of directors Thomas L. Hill, president of the American Society for the Promotion of Aviation and Col. Harold E. Hartney, president of the Aviation Business Bureau.

▪ Schools ▪

CURTISS-WRIGHT FLYING SERVICE has contracted with Clarksville Aviation Corp. to operate a flying school at the Clarksville (Tenn.) Airport. Capt. John F. Outlaw will be in charge.

MARYLAND INSTITUTE, Baltimore, is having its Market Place School enlarged at a cost of more than $33,000 chiefly to provide additional facilities for aviation courses.

PACIFIC TECHNICAL UNIVERSITY, San Diego, affiliated with the T. C. Ryan Flying School for flight instruction, will hereafter give ground school courses to aviation students at the San Diego Army & Navy Academy.

T. C. RYAN FLYING SCHOOL, San Diego, announces the opening of a five-weeks' course in parachute rigging.

STANDARD FLYING SCHOOLS, with headquarters at Los Angeles, has leased a field near Santa Paula, Calif., and will establish a branch school there under the direction of Lowell Lamoreaux. Fleet training planes will be used for instruction.

ST. LOUIS-UNIVERSAL FLYING SCHOOL, Robertson, Mo., announces that it has recently graduated three limited commercial pilots, one private pilot, four mechanics, and three welders.

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Pratt to be Ass't Air Corps Chief

WASHINGTON—Lieut. Col. Henry Conger Pratt has been nominated by President Hoover for the position of Assistant to the Chief of the Air Corps. If confirmed, he will occupy the position for a term of four years from date of acceptance, with the rank of Brigadier General. The term of Brig.-Gen. Frank P. Lahm, recent incumbent of the position, expired July 16.

Colonel Pratt

Lieut. Col. Henry C. Pratt has served in the Army continually since his graduation from West Point in 1904. He has been commanding officer at Kelly and Mitchel Fields, and is at present Air officer of the Hawaiian Department. He is an Air Pilot and is on the General Staff Corps Eligible List.

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Pacific Firm Sells 31 Used Craft

LOS ANGELES—Sales of 31 used airplanes since the first of the year are reported by Maynard Dowell, sales manager of the Pacific Aircraft Brokers, this city. Total volume of business grossed approximately $50,000 for an average sale price of approximately $1,600 per airplane.

▪ Briefly ▪

According to the latest Department of Commerce report, there are now 216 licensed women pilots in the United States, of whom 165 are private pilots, 27 limited commercial, 1 industrial, and 23 transport.

One of the features of the American Legion convention in Boston this fall will be an aerial parade, to be held Oct. 7, with planes representing every State.

The largest of the helium cells for the Naval airship 'Akron' has been put in place between the three main rings and girders and inflated, for the purpose of making stress tests. Since their completion, the hangar where the ship is under construction has been reopened to the public.

Among the records which fell when the Hunter brothers broke the refueling endurance mark were several in connection with engine performance in continuous flight, according to Wright Aeronautical Corp. For example, the crankshaft revolved 52,000,000 times, and the supercharger 405,600,000 times, while each piston traveled 9,025 mi. inside its cylinder.

Curtiss-Reid Aircraft Co., Ltd., Montreal, has temporarily laid off about half of its staff of 100 employees.

Gibbs Gas Engine Co., Jacksonville, Fla., is instituting an aircraft repair division, specializing in work on amphibions and seaplanes.

A Ford 9-A transport with three Wasp Junior engines has been delivered to Clifford Ball, Inc., for use on the Cleveland-Pittsburgh line.

Heath Airplane Co., Chicago, is considering establishment of a factory in the Southwest, possibly in Fort Worth, Tex.

Contracts for forest patrol have been awarded to Northwest Air Service Co. for the Seattle district and to Mamer Air Transport for the Wenatchee district.

Southern Union Gas Co. has completed an aerial survey of the proposed natural gas pipe line from the northwest corner of New Mexico to Albuquerque and Santa Fe.

Copperweld Steel Co. has received an order for 3,000,000 ft. of wire to be supplied to the Army Air Force for use in radio antennas.

Capt. C. Q. Strom, of the Royal Swedish Air Corps Tactical School, has been authorized by the Secretary of War to attend the 1930-31 course given by the U. S. Air Corps at Langley Field, Va.

Lieut. Yantis H. Taylor, instructor at Kelly Field, recently made a one-day flight from Laredo, Tex., to Portland, Me., in a Curtiss Hawk at an average speed of 141 m.p.h.

Aviators participating in the Second Annual Nebraska Air Tour made over $8,000 from taking up passengers and the tour as a whole showed a profit according to Porter Allan, financial secretary.

Public Service Commission of New Hampshire is preparing a new aviation code for the State.

Air races were held in connection with a meeting of southwestern oil men at Big Spring, Tex., July 4.

The National Air Race Corp., Chicago, has awarded $100, a trophy, and a season pass to the races to Leonard Chester, who won the corporation's poster contest for art students. The winning poster will be used for billboards.

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New Firms Announced

ELGIN FLYING SERVICE, Elgin, Ill., capital, $20,000, Charles D. Vary, president and treasurer, to establish an airport and flying school.

ISLAND AIRPORT, INC., Dickensen's Island, Knoxville, Tenn., 2,000 shares no par value stock, by Ralph C. Jamison, Tom O. Kesterson, and S. Decker Coykendall, to buy and sell airplanes, operate an aviation school, provide airport service.

MOHICAN AIRWAYS CORP., Cairo, N. Y., capital $20,000, by John A. Cryer, Harry C. Emens, Herbert Bogardus.

MOSCOW AIR TRANSPORTATION CO., INC., Moscow, Idaho, capital $25,000, by Charles Carter, A. L. Rollefson and J. E. Miller.

SOLO SYSTEM OF FLYING INSTRUCTION, INC., 342 Madison Ave., New York, N. Y., capital 1,000 shares preferred stock at $100, and 2,000 shares common stock at $1, by George Rockwell, Jr., Ferdinand D. Sanford, Elizabeth L. Hughes, to deal in aircraft and give flying instruction.

TRANS-FLIGHTS CORP., 300 Madison Ave., New York, N. Y., capital $20,000, by Sylvia Levin, Irving Gerstman, Sophie Cohen, to deal in aircraft.

•

Representatives Named

D.A.C.—Willard Denny, Woods Hole, Mass.

INLAND—W. G. Houston, Chicago, Ill.

IZELAND AMPHIBION — Stearns Marine Service Co., Boston, for New England.

STINSON—Varney Air Service, Oakland, Calif.

WACO—Phil Love, Lambert Field, St. Louis; Sellers Motor Co., Jackson, Miss.; Long Wells Motor Co., Mullens, W. Va.; John G. Carroll, Baltimore; Walter Higley, Denver; Southern Aviation & Transport Co., Memphis; Crescent Air Service, Bowman Field, Louisville, Ky.

▪ Personnel ▪

FRANK H. RUSSELL, vice-president in charge of sales of the Curtiss Aeroplane and Motor Co., Garden City, has resigned from the Garden City company to become vice-president of the Curtiss-Wright Corp. with offices at the headquarters on 57th Street, New York City.

K. K. KNICKERBOCKER, Chicago traffic manager of Boeing System, has been transferred to the operations division and will have headquarters at Cheyenne, Wyo. He is succeeded at Chicago by A. G. Hinsman, formerly passenger traffic manager.

CAPT. HARRY E. SHOEMAKER, U.S.N., will succeed COMDR. MAURICE R. PIERCE as commander of the Naval Air Station at Lakehurst, N. J. Commander Pierce has been transferred to the aircraft carrier, U.S.S. Lexington, as navigator. Captain Shoemaker has served in the Navy continuously since his appointment to the Naval Academy in 1901. He has recently taken a Naval course of instruction in lighter-than-air craft. Before that he was Inspector of Ordnance at Fort Mifflin, Pa.

Capt. H. E. Shoemaker

STUART R. IVES, vice-president and general manager of Lyle Culbert & Pipe Co., Minneapolis, Minn., has been made general manager of Armco Culvert Mfrs. Assoc., Middletown, Ohio. He is a specialist in drainage problems.

EDWARD S. EVANS, president of Detroit Aircraft Corp., has resigned the presidency of the Detroit Board of Commerce Aircraft Bureau, due to his election as president of the Board of Commerce.

J. W. ROTHMEYER, RICHARD F. HOYT, THOR M. OLSON, and JOHN L. BROWN have been made directors of Ex-Cello Aircraft & Tool Co., increasing the membership of the board of directors from five to nine.

PAUL OBELL has been named N.A.T. field manager at Moline, Ill.

WARREN E. MOZELI, recently sales manager for Curtiss-Wright Flying Service at Oklahoma City, has resigned to become distributor for Stinson and Waco planes. B. S. GRAHAM, vice-president for Curtiss-Wright in Oklahoma, will take over the duties of sales manager also.

E. A. PETERMAN has been assigned to the Los Angeles branch office of the engineering section of the Aeronautics Branch.

DOUGLAS T. KELLEY, general superintendent of Aritech School of Aviation, San Diego, Calif., has been appointed field manager of Lindbergh Field.

The
AVIATION
News

July 19, 1930

Vol 1 No 2

A McGraw-Hill Publication

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E Sydney Bowen Jr *Associate Editor*

Robert F Powell *Managing Editor*

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McGraw-Hill Publishing Company Inc
Tenth Ave at 36th St New York N Y

✦ The League of Nations meeting on problems of international air transport will justify itself only if as planned it leads to the elimination of some of the existing international aeronautical organizations If it merely adds another to their number, it should never have been held The most casual count shows almost a dozen international committees and conferences already at work in more or less overlapping divisions of the aeronautical field

✦ Consolidation of airlines continues although consolidation of manufacturing companies has paused for a breathing space Sixty-five per cent of the country's transport mileage flown daily is at present in the control of three groups The signs of the times leave no doubt that the formation of consolidations of manufacturing companies will be resumed as the financial situation becomes clearer

✦ The debate over the arrangement of events at the National Air Races is essentially a dispute over the purpose to which the Races are directed. If they are to encourage aviation as a sport the management has done exactly right in emphasizing small planes and low power. If the object is to provide a measure of the capabilities of transport airplanes, then the emphasis should be upon competitions for transport types and for 300 hp or more The two may be combined to some extent, but so far as a choice must be made between them we favor the former alternative

✦ The transport companies that are making trial of the constitutionality of the tax imposed upon aviation gasoline in various states, especially at present in Oklahoma are going to law in the common cause and the cause of reason The Federal government might properly collect a fee for the services that it renders to aviation State governments, with few if any exceptions, have not the shadow of a justification for doing so A state tax on aviation fuel is wholly inequitable, and the aviators should be entitled at least to the same consideration as most coastal states give to motorboat men

✦ The making of air law under our legal system proceeds more by decision and precedent than by statute With the Worcester airport case of three months ago there now dovetails the Curtiss Cleveland airport decision Massachusetts and Ohio courts have agreed in finding that operations of aircraft may constitute a nuisance and may be the ground of a trespass action but only if the operation is unreasonable Old legal catchwords and maxims must be interpreted the courts have been generous enough to find, in the light of changed conditions of life.

✦ Transportation and production statistics are rapidly diverging Production and sales are uniformly found to be off from last year's record. The patronage of airlines uniformly shows brilliant gains Whatever the remote future may bring, obviously in 1930 aviation is primarily a form of public transport Private ownership is a minor element

✦ Just as we were beginning to feel that the days of the off-center records—those for continuous looping barrel rolling, et cetera—were passing, comes the information that a coast flier "has turned 46 outside loops ten better than the record set earlier in the day at Chicago" Pardon us a regret, apparently those days are not past.

✦ We would much prefer to read of a record number of plane sales—and the manufacturers are at one with us Straight, sensible, and safe flying is the backdrop with which to set the stage for such a record

✦ One of the most encouraging symptoms of confidence in the lasting qualities of the glider movement is the great interest displayed both in America and in England by oil companies Obviously they can expect no direct profit and little return of any sort except from the ultimate effect of gliding on public interest in power flying.

✦ "Empire air routes" has long been the battle-cry of British aviation A score of flights from England to Australia and England to South Africa have helped to give it the appearance of reality Another long step in the creation of intra-Empire, or inter-Dominion, air transport, will be taken when the R-100 flies from Cardington to Montreal In covering a world-wide area neither the airplane nor the airship can spare the other

Salesmanship

Watching the News Go By

By ROBERT R OSBORN

You know we have always deplored the scarcity of poetry and poetic souls in the airplane business so whenever we do run across departures from the prosaic we hasten to call attention to them The following piece of poetry would seem beautiful to any airplane manufacturer in times like these—it was discovered by Mr C E H in the cafeteria owned by an airplane company in Baltimore

> We are building a hydro aeroplane
> A type never seen before
> And if our work is not in vain
> We shall build a hundred more"

• • •

This man C F McR, who must be a paid propagandist of the State of California is in again

"You keep harping about electric stoves—I wonder if you know that a California man was the first to equip his plane with an electric curling iron? The news item was taken from a recent Sunday supplement story 'Jack Frye president of the Aero Corporation of Calif, has recently purchased a luxurious aerial yacht embodying many modern features which make it a combination business and pleasure craft Mr Frye has a desk for his stenographer as well as an electric stove, electric radio, and electric refrigerator Seven passengers can be comfortably accommodated in this plane, which boasts an electric curling iron for the convenience of feminine guests'

"Shades of Freddie Hattoom, the perspiring publicity man who fathered this story, if that isn't the most completely equipped electrical airplane in California, I'll eat it. Now let's see some Eastern punk try to match it Some people may wonder what Jack does with the electric radio instead of using the ordinary sets like us common folks The electric stove requires no explanation, no plane is complete without one but what does his stenographer need with an electric refrigerator,—or any other kind of a refrigerator? The less said about the curling iron the better as Jack's wife has naturally curly hair"

• • •

"In tri-motored planes it has been variously estimated that the cost of gas fuel runs from $12 to $18 an hour the difference in the amount burned being caused by flying conditions, such as with tail winds and against head winds" Item from the Chicago *Daily News* clipped by K. C. H

We think a much more important factor in determining how much gasoline is used is whether or not the pilot has a party scheduled at the end of the run

• • •

Under the heading "Twenty Years Ago Today" in the New York *Tribune* we find an interesting item "Maj Gen. J Franklin Bell, former chief of staff of the United States Army who is to take command of the Philippine Division asked yesterday his opinion of the possibilities of the airplane from the point of view of the soldier, said that he had no doubt that airplanes will be perfected in the course of ten years at the most, if not five, that may be relied upon to carry from three to five persons and possibly a small amount of explosives in addition He thinks they will be of unquestionable value in photographic work and reconnaissance"

Apparently the General had no idea that the greatest modern use of the airplane would be the carrying of electric stoves for the first time in history

• • •

Mr A A O of Athol Ida. sends in the following from the Spokane *Daily Times* "Portland, Me, July 3—Dawn today found Lieut Yantis H Taylor and his Army pursuit plane here after 15 hours of flying from Laredo, Tex, 22 100 miles away to the Southwest"

Must have been over Tokio about midnight

From the Daily Press

Next, As A Nation, We Fly

The tremendous and unprecedented prosperity which the development of the resources of the United States exhibited to an astonished world were paralleled by the progress of transportation The student of history cannot avoid the conclusion that the ability to "go places" had a good deal to do with the capacity to make wealth

Following this suggestion one easily justifies the frequently heard prediction that the next great advance in economic development will come a-flying Prosperity is coming on wings Aviation will enlarge the boundaries of business opportunity, as did the development of motoring during the past quarter century

A writer in a current magazine discusses the possibilities of aerial transportation in extending the available vacation grounds from any one of the great centers of population At present he says the great majority who can afford but two or three weeks of vacation are limited to certain well trodden areas in their vicinity The New Yorker may go up to the Adirondacks, to the Maine woods or to northern Michigan

"Five years from now," continues the writer, "he will be able to go to the Pacific Coast. The trip will take little more of his time and cost little more money"

It might seem that enlarging the facilities for vacationing would have but slight influence upon prosperity but the history of motoring proves the contrary By far the greater functioning of the automobile at least until recently, has been in the service of recreation

But producing these pleasure cars has brought into existence industries involving billions in investments It has given employment to millions scattered among the villages and hamlets of the entire country And not the least of the profitable occupations initiated and maintained by motordom are those catering to tourists and vacationists—DETROIT NEWS.

• • •

Recklessness in the Air

A timely word in condemnation of stunt flying, especially in the vicinity of cities, is spoken by Archibald Black an air transport engineer, in his column in *The American City* "It seems unfortunate for the future of aviation," he writes, "that the industry should be so slow to condemn the futility of stunt flying with its destructive effect on the mental attitude of prospective passengers

"While every one admits the definite value of certain maneuvers such as the tail spin in military work and in instruction flying these serve only to discourage the sale of flight tickets when performed at airports for publicity purposes No one denies that stunt flying attracts a crowd but not every one appreciates the fact that it is equally effective in preventing those in the crowd from flying"

Stunt flying over cities is prohibited by law in all states, we believe. But a great deal of that sort of flying is done over airports much of it by daredevils with no other object than to amaze the crowd. As a rule these stunts have no scientific value. The stability of a plane has nothing to do with the number of barrel loops it can accomplish nor the distance it can be flown upside down and backwards

Aviation has passed from the circus stage and has become a practical partner in modern commercial and social life. The harm that may be done to public confidence by one accident caused by reckless stunting cannot be repaired by a hundred successful flights, performed on schedule and to the safety and comfort of its passengers—ALBANY KNICKERBOCKER PRESS

Aeronautical Finance

By R. R. DOANE

Statistical Summary

Weekly Comparisons

	Week Ended July 9	Previous Week	Same Week 1929
Aviation			
Aviation stock averages	20 01	19 44	40 49
Number of stocks traded in (1)	40	46	60
Volume aviation share sales (2)	193 900	402,300	329 800
Ratio aviation share sales to total share sales (3)	1 69	4 60	1 34
General Market Data			
Total volume share sales N Y Stock and Curb Exchanges	11 397 900	8 222 380	34 175 330
Railroad shares N Y S E	293 300	222 220	t 795 070
Market averages (N Y Times)	196 00	195 29	295 43
New domestic financing	$104 492 000	$23 364 000	$45 913 000

Semi-annual Comparisons

	First Six Months 1930	Same Period 1929
Aviation financing	$693 000	$150 926 000

Notes—(1) All stocks actively traded in on both New York Stock Exchange and the Curb Exchange also contains over-the-counter stocks on which bid and ask quotations are regularly published (2) Total Volume on both N Y Stock and Curb Exchanges (3) Percentage of aviation stock trading to total volume of sales of all classes of stocks on both exchanges

Inventories of Finished Stock

One of the most difficult items of accurate measurement is that of inventory of finished stock As this is a factor of considerable significance in its relation to current assets as well as to the proportionate amounts of capital involved in carrying unsold products it is worthy of detailed treatment Although many economists have long believed that accumulation and depletion of stocks of finished goods in producers' and distributors hands constitutes an important cause of changes in individual as well as in general industrial activity yet no details approximating more than a rough idea concerning the size of such inventories were systematically collected by any agency government or commercial before 1919 It is therefore not to be wondered at that this same item constitutes a somewhat dark and puzzling corner of the aeronautical field

It is a relatively easy thing to measure the visible supply" of such commodities as wheat, flour, meats cotton silk oil, coal, lumber etc but when the field of controlled manufacturing output is reached the problem becomes complicated, the results often meaningless The modern highly specialized continuous process of manufacture is capable of exercising such prompt control over the size of inventory that even though we do have what appears to be an accurate tabulation today it may become highly misleading as a base figure for future estimating purposes within a very short period of time

As an illustration one concern may show 50 finished units on hand and yet may have an additional 50 fuselages on the factory floor awaiting nothing but the installation of the engine and the setting of the wings. Thus within a few hours time this company's inventory of finished stock is capable of a 100 per cent increase Also it is a first principle of business practice to see to it that the supply shall be adequate to the demand—and in a new and developing industry where the *elasticity* of this demand is more or less problematical the margin of this finished stock may be expected to be wide

Regardless of the difficulties encountered in determining statistically the exact amount of finished stock on hand an approximation is better than no estimate at all In this connection the New York *Wall Street Journal* has recently undertaken a compilation through a careful checking of all licenses in manufacturing and affiliated company names as recorded in the Aeronautical Chamber of Commerce quarterly report

The compilation consists of planes on hand at aircraft manufacturing plants and dealers' agencies and those distributed at the Curtiss Wright Flying Services chain of airports Of the latter's total (795 planes) nearly 201 are in use for demonstration and transportation and cannot be considered as actually for sale or contributing to idle inventory However this number may be considered as slightly more than offset by planes on hand and for sale at other large flying schools and services Of the 795 planes thus accounted for by Curtiss Wright 161 were products of companies outside the Curtiss Wright group but which the Flying Service has licenses to sell

Table I on page 14 gives the compilation of unsold planes of prominent make as of April 15, as made by the *Wall Street Journal* In no wise is it to be taken as representing an official estimate of the Aeronautical Chamber

The *Journal* further goes on to state that with the inclusion of other companies and services "the actual number of commercial planes in this country for sale at the present time is around 1,500 Since the average price of these craft plus power plants is approximately $10,000 total plane inventories are estimated at $15 000 000"

As a check against this estimate we have the total net sales and inventory increases of ten representative companies who are responsible for fully 80 per cent of the planes thus estimated as "carry-over" from 1929 The following tabulation is taken from the official annual reports of the ten companies

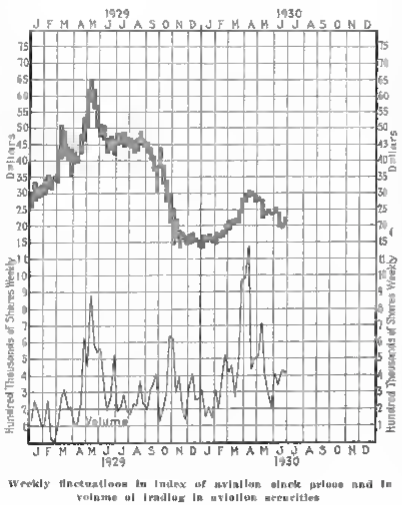
	Net Sales 1929	Inventory Dec 31 1929	Increase over 1928
	(000 omitted)		
Curtiss-Wright	$26 848	$12,796	$2 592
Detroit	837	914	632
Fokker	*2,700	2 409	726
United Aircraft	†26,424	7 633	3 559
Bellanca	564	545	543
Consolidated A	2,819	1,426	1 081
Douglas	2,346	982	332
Fairchild	3 494	1 131	133
Stinson	1 362	136	136
Waco	2,012	334	23
Totals	$68,611	$28,136	$9,584
Add'l equal 20% for companies not included			1 912
			$11 501
33⅓% of inventory for raw materials special unfinished orders and experimental work			3 034
			$2 662

* Estimate.
† Estimate exclusive of transport revenues'

Of course very little is known of the character of these inventories Exact data on that portion which is raw materials goods in process, finished stock etc is not known and is usually held in some degree of confidence by the producer We do know, however, that inventories are usually carried at cost or current market price whichever is lower We have a fair knowledge of the approximate amounts of raw materials usually carried From this point on it is every man for himself in formulating his own estimate

It should be recalled that the $15 000 000 unsold stock estimate is figured at the full retail price and not at the cost price to the producer With these factors all taken into consideration there is a possible margin of error of some 25 or 30 per cent in all such attempted estimates

In view of the wide publicity given the above compilation it should be stated in conclusion that estimates from responsible sources close to the industry hold it to be much too high and place the total inventory of finished stock now at a figure very near 900 planes



Weekly fluctuations in index of aviation stock prices and in volume of trading in aviation securities

Table I

Make	Oct 15 1929	Jan 15 1930	April 15 1930
Fairchild	52	64	91
Arrow	102	90	80
Spartan	19	33	38
American Eagle	21	28	35
Bellanca	13	21	29
Swallow	23	36	29
Moss Aircraft	30	23	23
Parks	4	26	23
Great Lakes	19	12	22
Avian	24	20	20
Boeing	10	23	20
Lockheed	22	10	10
Ryan	4	11	17
Alexander	19	21	12
Barling	63	37	16
Fokker	9	12	14
Stinson	4	7	12
Waco	13	10	12
Ford	9	14	9
Stearman	4	9	2
Sikorsky	2	3	6
Total	468	323	336
Curtiss Wright			
Miscellaneous	40	60	60
Robins	216	386	343
Travel Air	24	106	106
Fledgling	20	86	87
Command Aire	61	71	21
Cessna	41	64	63
Moth	19	51	37
Total	429	832	293
Total Curtiss-Wright	429	832	293
Other Mfrs listed above	468	525	336
Others not listed above	246	237	132
Grand total of planes in stock	1 143	1,596	1 468

130 Stinsons Sold This Year

WAYNE (Mich)—Stinson Aircraft constructed and sold more planes in the first six months of this year than during the entire year of 1929, announces W A Mara, vice-president In production but five of the six months of '30 Stinson built and sold 130 cabin planes as compared with 120 for the full twelve months of '29 The report continues During January the Wayne plant was closed for revamping to handle the 1930 production In February only four planes were produced although approximately 50 orders were on hand In March eight planes were produced while in April, production had been stepped up to 32 May production reached 54 planes Of the 97 planes delivered in the first five months of 1930, 91 were Stinson Juniors equipped with 210 hp Lycoming engines Thirty-six of the 43 planes built and sold in June were also four-place Stinson Juniors with Lycoming engines.

Aviation Security Movements

The air stocks with but one or two minor exceptions have shown considerable strength during the past week with the majority of the stocks recording slight advances All of the transport stocks have recorded gains with the exception of T A T which remained stationary while Western Air Express showed the only decline (2 points) for the week Among the larger companies The Aviation Corp declined ½ while Detroit Aircraft and Curtiss-Wright recorded small gains of ½ each with Fokker advancing ¼ Douglas ¼ United Aircraft 1½ and Consolidated Aircraft 4½ points.

Earnings and Dividends

Ex-Cello Aircraft has reduced its quarterly dividend from 40 to 20 cents

Alexander Industries reports earnings for the first five months ending May 31 at 8 cents per share

Stockholders in the Arkansas Airport Co have received their sixth quarterly dividend checks of seven per cent The company operates the Toney Field, Pine Bluff, Ark

Bendix Aviation Corp reports earning its dividend in May despite the general recession in automotive and aviation industries The company has effected savings in overhead of $1 800 a day There has also been a steady reduction of inventory amounting to approximately $1 000 000 or about 20 per cent. The company reports $10 000 000 in cash.

Report on Position Of The Aviation Corp.

NEW YORK—The Aviation Corporation of Delaware reports that although it will show a substantial deficit from operations during the second quarter, recent curtailment of operating costs and greatly increased revenues from mail and passenger traffic will enable the company to show a decided improvement over the first three months when a net loss of $863,651 was reported by the organization

In the first two months of the second quarter the company's planes carried more passengers than in the first three months of the year and the figure for May was more than triple that of January The company's air mail operations have also shown a steady increase in poundage in each month during 1930, the total for the first five months this year being 17 9 per cent over the corresponding period of 1929 Indicative of increasing revenues is the fact that April and May both recorded increases in the number of passengers carried as compared with March, while in both of these months fewer miles were flown than in March

Marketable Securities Total $16,000 000

The company currently has cash, call and time loans, and marketable securities with a total value of about $22 400,000 equivalent to $7 30 a share. Of this total $8 000 000 has been placed in call and time loans while marketable securities were carried on the books as of June 28 at $14 000 000

As of that date the company had $260 000 cash This does not include cash resources of subsidiaries which are substantially in excess of current liabilities Of the total of $14,000,000 in securities as of June 28 $3 000 000 was in U S Fourth Liberty 4¼ per cent bonds $6 750 000 in general marketable securities, a substantial proportion of which was bonds, and $4 275 000 in aviation securities Since that date about $2 000 000 worth of Liberty Bonds have been purchased with money on call and that obtained from sale of other bonds

March Mail Grossed $125,988

The company's March mail contracts grossed $125 988 on 295 149 mi of flying or an average of 43 cents per mile According to rates under the Watres bill as formulated to date it is estimated that all of the company's mail routes with the possible exceptions of those between Boston and New York and Dallas and Brownsville, would gross more revenues per mile under the new rates with the average gross per mile for the entire system being in the neighborhood of 60 cents This would increase monthly revenue about $50 000 on the March flying mileage, and would amount to a yearly increase of approximately $600 000 on the basis of routes now operated.

New York Air Tour Leaves From Buffalo

BUFFALO—Apparently stressing more than have some other tours the civic value of the enterprise and offering no prizes to participants, the New York Air Tour left Buffalo on July 14, 23 planes strong to return here July 19

Sponsored by the National Aeronautic Association and the New York State Aviation Commission, chairmanned by Senator J Griswold Webb, the trip is planned as an annual event It is the first of its kind held in the state since September-October of 1926 N.A.A. chapters, aero clubs, and civic groups are handling arrangements, while George H Starr is manager

For nearly a week prior to the start of the tour the Aero Club of Buffalo and city organizations staged functions climaxing in air races and acrobatics at the Buffalo Airport, July 13, to stimulate interest in the event

This year's course takes entrants to Rochester, Utica, Albany Schenectady, and Syracuse for overnight stops and to Niagara Falls, Hornell, Saratoga Springs Poughkeepsie, Norwich and LeRoy for mid day stops

It is proposed in subsequent years to have the flight itinerary include municipalities on Long Island, in the St Lawrence and Champlain areas and in the southern tier of the state.

Worthy of specific attention is the bulletin issued by tour officials, in which one finds a vast store of information on the whys and wherefores of the flight its value and possibilities, rules and regulations, future plans, etc Cities designated as route stops are contained in a map printed on the front cover of the pamphlet

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D.A.C. Reports Half-Year Sales

DETROIT—Detroit Aircraft Corp sold or took orders for 123 airplanes during the period from Jan 1 to July 1, which represent a gross business of $1 648 045. The 79 planes that had been delivered by July 1 were valued at $631,045, while the 44 craft on order and for which deposits had been placed represented a gross value of $1,017 000 Dealer commitments on July 1 amounted to $1 600 000 more Increased production schedules are in force at all plants, the company reports

■

Stinson and Savoia Get ATC's

WASHINGTON—Two more planes have received approved type certificates These, according to certificate number, make and designation type, power plant, weight empty, useful load, and gross weight, are No. 335—Stinson SM-6 000, eleven-place cabin monoplane three Lycoming R-680 215-hp engines, 5,475 lb., 2,925 lb, 8 400 lb; No 336—American Aeronautical Savoia-Marchetti S-56-B, three-place open amphibion, 125 hp Kinner R-440, 1,462 lb, 738 lb, 2,200 lb

Looking Back
A Quarter of a Century

In becoming a great industry during the War aviation lost something of its romance. Those whose interest in matters aeronautical has been constant for so long a period that they can recall their own experiences of pioneer days will always look with a little pity on the newcomers who have known the airplane only as a finished product It is a big business now but for the old timers nothing will ever replace the memory of the days when little groups of enthusiasts cheerfully accepting the popular decree that they were quite mad went out into the fields in the calm of dawn to put their theories to the test. We ask ourselves of the new product now "How will it sell?" but in the first decade of the twentieth century we put the question, "Will it fly?" and there was no certainty about the answer

Alike to refresh the recollections of the pioneer and to compensate the newcomer as far as possible for his failure to have known those exciting days at first hand, we inaugurate this column Week by week or at least in each week in which anything happened, the story of the events of twenty-five years ago will be recited and recited in the spirit of the times We shall not assume the omniscient and Olympian detachment of the historian but handle the happenings of twenty-five years ago as news as they would be seen by those having no knowledge of what was to come Our object is not to write history but to re-create an atmosphere

The Position at the Beginning of July, 1905

The inventors of flying machines are not making much noise at present Although most people do not yet believe it it seems to be well authenticated that two young men from Dayton, Ohio, Wilbur and Orville Wright by name, have actually succeeded in making short flights without the aid of a balloon. The story is that about eighteen months ago (on Dec 17 1903) one of them managed to keep their machine in the air for almost a minute at a lonely beach down in North Carolina. Then they came home and last summer they started work near Dayton, making about a hundred short trips and managing to stay in the air on one occasion for as much as five minutes Their apparatus sounds like a threshing machine, and looks like nothing on earth They have been pretty shy of publicity, and there have been very few reliable witnesses of their flights, but the story is that they do not believe that their flying machine has reached its limit, and that they are getting ready for some new trials soon.

A Flight Around the Eiffel Tower

Over in Germany there is an old man, Count Zeppelin by name who is trying to build flying ships out of aluminum and who seems to be finding plenty of backing for his notions His ships are really balloons, carrying gas inside their framework. His first ship made a few short flights when it was perfectly calm, but what good is an airship that cannot travel in a little wind? He is now finishing a second of the same type, but most scientists are agreed that these attempts to push a balloon through the air and steer it cannot amount to very much It will be remembered that Santos Dumont, who was wise enough to make his power balloons small and handy instead of going into these clumsy giants like Count Zeppelin's, took several months of repeated trial and wrecked several ships before he found a day when conditions would permit him to travel a dozen miles from a starting point around the Eiffel Tower and back The French Army is still working with small ships of the Santos Dumont type

The United States Army sees enough hope in these power balloons to be willing to buy one, although on much less ambitious lines than Count Zeppelin's experiment. It puts the burden of proof on the inventor for the ship that is purchased must show its ability to fly for two hours and to make a maximum speed of twenty miles an hour An airship for these trials is now being built by Captain Thomas S. Baldwin an old county fair parachute jumper, who had some success in his demonstrations at the St Louis World Fair last year In the effort to reach the high speed demanded by the government a special engine is being obtained from a young motorcycle racer named Glenn Curtiss who lives somewhere in central New York Curtiss made a record a year ago by riding a motorcycle of his own construction ten miles in eight minutes and fifty-four seconds on one of the Florida beaches

"Another American Bluff"

Flying machine inventors in France are keeping very still at present Captain Ferber who has been making occasional experiments with pairs of wings which he holds under his arms while he kicks himself through the sky like Lilienthal in Germany and Chanute here some years ago is reported to have fully accepted the work of the Wrights He differs from most of his countrymen and other European authorities who are describing the report of the Wrights' flight in Dayton as "another American bluff"

Fireproof Air Mail Bags Tested

(Continued from page 7)

is another layer of asbestos cloth The completed bag is quite flexible and except for the added thickness of the side walls, should utilize no more space when filled than the ordinary, flat canvas mail pouch.

A circular flap is used to close the mail compartment of the Johns Manville bag Like the side walls, it is constructed of special canvas, asbestos cloth and asbestos fiber The circular layer of fiber is 12 in. across, the same as the inside diameter of the compartment, although the entire flap is 16 in. across The additional 4-in width of cloth around the edge is provided so that it may be tucked in around the mail The flap is sewed to the side wall one quarter of the way around.

The weight of a fireproof bag of the same size as the one with which the test was conducted is 17 20 lb. A canvas mail bag with approximately the same cubical content weighs about 3 lb.

Experiments Cover 2 Years

These bags have been subjected in the laboratory of the Johns Manville Corp to more severe conditions than would obtain in a fire following the crash of a plane according to H R Poulson, formerly of the engineering department of the concern and now sales engineer Mr Poulson is largely responsible for the development of the pouch which required about 2 yr He says that bags have been tested for as long as 22 min

The fact that the new mail bag is nearly airtight is one reason for its fire resisting qualities The water of crystallization in asbestos is another When the bag and its asbestos lining are heated the water will turn to steam However the loss of the water tends to make the asbestos lose its fibrous quality Like a safe that has been subjected to intense heat, the mail pouch in order to protect its contents must not be opened until it has had an opportunity of cooling The admission of oxygen while the bag is still very hot will result in the charring of the papers inside Half an hour is usually a sufficient length of time to allow the bag to cool.

Development of such a mail container has been sought for some time The extra weight imposed by asbestos has been one of the chief difficulties involved in the problem

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Air Corps Housing Bill Passed

WASHINGTON—The Omnibus Bill providing improvements totaling $4,370 019 for Air Corps fields (see page 1283 issue of June 28), was passed by Congress This is part of the drive by the Air Corps to improve the entirely inadequate housing conditions at the majority of its stations.

Fort Worth Port Makes Profit

FORT WORTH—A profit of $1,309.55 was earned by the municipal airport during June, according to the report of Manager William G Fuller just filed Gross income for the month was $2-661 81 and expenses $1 352 26 The largest item of income was $1,772.32 from the sale of gasoline and oil

■

Canada Accepts April Radio Program

WASHINGTON—The State Department has announced receipt of advice from the Canadian government to the effect that the recommendations worked out at the informal radio conference held at New York City April 10-11 had been accepted The recommendations are

"The co-ordination of airways communications and radio aids to air navigation in Canada and the United States is desirable and the following principles are proposed as a guide in the operation of these systems.

"The conference recommends that the two governments study these principles and attempt to apply them to their respective systems and that by correspondence and future conferences these principles be further developed and closer co-ordination obtained

"It is further recommended that —

"1 The International Air Calling Frequency 333 kc be not required regionally for aircraft or aeronautical stations in Canada or the United States

"2 It be recognized that a frequency separation of 6 kc. is ordinarily sufficient between stations operating radio range beacon and radio telephone services.

"3 A minimum distance of 750 mi between radio beacon stations operating on the same frequency is desirable It is recommended that this separation be maintained between nations although in some cases it may be necessary to reduce the separation within the interior of either country

"4 The following frequencies 237 240 248 278 kc out of the band 194-284 kc. be reserved regionally for air services

"5 The following frequencies shall remain free from assignments in the United States within 750 mi of Canadian airways radio stations 245 290 296 326 332 kc.

Changes to be Discussed

"In addition no further assignments in the United States should be made on the following frequencies within 750 mi. of Canadian airways radio stations 240, 314 kc.

"6 The following frequencies shall remain free from assignments in Canada within 750 mi. of U S. airways radio stations 254 260 266 272 284 302 308 320, 338 344

"7 The frequency 278 kc. should be reserved primarily for low power airport use

"8 One frequency approximately 237 kc. shall be reserved for emergency messages from ground stations to aircraft in cases where such messages might interfere with the regular airways beacon service

"9 The following frequencies should be reserved for Canadian stations operating along the Canadian Transcontinental Airways from Halifax to Vancouver 3493 5580 kc.

"The United States authorities will discuss with aviation companies operating between Chicago Minneapolis, and St. Paul a change of frequencies from those now specified in the United States Aviation plan for the Green Chain to the Red Chain frequencies in order that Canadian planes flying from Winnipeg to Minneapolis and St Paul will be able to have closer frequency co-ordination

"10 The United States will continue to use 3106 kc. as a national calling frequency and Canada will use the frequency 5620 kc. for the same purpose since the experience gained to date in the United States and Canada would indicate that the common calling frequency selected in the United States might not be equally suitable in Canada"

Will Ask Bids For Rio Mail Line

Post Office Plans East Coast of S. A. Extension

WASHINGTON — Extension of air mail under United States contract down the east coast of South America is being planned for actively by the Post Office Department and it is anticipated that United States mails may be carried along that coast by fall The extension will be from Paramaribo, the present southern terminal of Pan American Airways in that direction under United States contract, to Rio de Janeiro Bids will be asked soon

Pan American is operating between these two cities now but is able to carry only Brazilian mail on the northbound journey under a contract with the government of Brazil New York, Rio & Buenos Aires Line has been operating along the same route between Buenos Aires and Miami by way of Rio and other coastal communities for a longer period This service is for passengers to and from this country and for mail supplied only by South American countries

Competition Expected

Considerable rivalry between the two companies for this contract is being developed Associated with Nyrba is the American International Airways which is now operating Nyrba's link between Santiago, Chile and Buenos Aires and which made a determined bid for the contract finally awarded to Pan American interests for the service down the west coast of South America Pan American received this after a protest and review of the award

Soon after announcing plans for this newest bid in South American mail routes, W Irving Glover, of the Post Office Department, issued a call to American interests to take more seriously the future development of trans-Atlantic air mail This was prompted by the plans to fly the Dornier Do X across the Atlantic this season with a mail load

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Tulsa Reports Heavy Traffic

TULSA—For the fifth successive month the Tulsa Municipal Airport has been one of the busiest airports of the world in patronage A total of 11 009 persons were cleared in and out of the field during June In the two years existence of Tulsa's Municipal Airport, the traffic handled has totaled 110 528 persons and 28 100 planes, the number of attendants at the field having grown from three to 243 including those employed by the various airlines operating through the port Five regular scheduled air passenger lines and one mail line, providing both day and night service, now operate through the field These figures are exclusive of the other three major airports in Tulsa where complete records are not kept

N.A.T.'s Newark Hangar Designed

Plan $110,000 Building For New Air Mail Terminal

CHICAGO—Construction of a combined hangar and passenger station at Newark Metropolitan Airport, in preparation for the opening of passenger service between this city and New York, will be commenced in August by National Air Transport, Inc, according to Ralph H Higgins chief engineer, who has just completed plans for the structure. Bids have not yet been requested but it is believed that the building without equipment will cost from $100,000 to $110,000

The hangar proper will measure 120 x 120 ft. and will have openings the full width on the north and south sides Sectional steel doors are to be used and there will be a clearance of 20 ft The roof will be of the bowstring type and is to be constructed of steel Along the east wall or behind the hangar there will be a one-story 120 x 25 ft lean to which will house the boiler room mechanics' toilets and showers a storeroom stock room, oil room and the service shop Planes and engines operated by N A T will be serviced only at the Newark terminal of the line. The overhaul shops will continue to be located in Chicago

Pilots' Quarters on Second Floor

Another 120 x 25 ft lean-to will be constructed at the front of the hangar This will be one story in height except for a 60-ft portion at the center, which will rise two stories above the ground. The 60 x 25 ft second floor of the structure will house the pilots' quarters, which will include bedrooms, toilets a recreation room and a locker room The radio room will be located there, too The ground floor will be occupied by the passenger station, operations and general offices of the line.

The terminal will be done in Colonial style of architecture The walls are to be of 8-in plain concrete with a facing of light brick 4 in thick Cast stone will be used at the corners and at other points for decoration Surmounting the second story of the lean to to the west will be a false gable roof Colonial pillars will run from this roof to the base of the building

Foundation Presents Difficulties

A large part of the cost of the new hangar unit will lie in the foundation The property occupied by the Newark airport is entirely made land and piles must be driven to support the building These probably will be of concrete since the water level is 13 ft below the surface Several types of construction for the hangar floor were considered in drawing up the plans for the N A.T structure These included the battle deck and the reinforced concrete slab but it was finally decided to use a built-up floor

The 120-ft square to be covered by the hangar floor will be divided into six 20 x 120-ft bays running from front to back Piles will be driven around the edges of these bays and seven 120-ft reinforced concrete beams will be laid over the piles along the sides of the bays Twelve-inch steel "I" beams are to be placed over and at right angles to the concrete beams From this description it will be seen that the foundation of concrete and steel beams will present somewhat the appearance of a checkerboard before the 5-in. reinforced concrete slab floor is laid. It might be added that three piles will be driven together at the ends of the concrete beams to support the columns that will hold the roof structure

N. Y. Airport Under Indictment

NEW YORK—An indictment as a public nuisance has been issued by the district attorney of Westchester County against the Westchester Airport Corp's plant at Armonk on the complaint of neighboring wealthy residents that their buildings are continually subjected to clouds of oily dust. This is to be in the nature of a test case to see if and how much such alleged nuisances may be controlled and follows threats of similar action last year

W.A.E. Not to Lower Rates

LOS ANGELES—Western Air Express has announced that it contemplates no change in the existing fares over its lines These rates average between $0 07 and $0 09 per mile and, thus are about what the T A T-Maddux and American Airways and S A F E lines have attained in their recent revision upward On the Los Angeles-Kansas City and Los Angeles-Dallas services the fare is $0 08 par mile

Traffic Increases Reported by Companies

NEW YORK—Reports received here from various airlines covering various operation periods indicate gratifying increases in traffic in recent months Pan American announces that on July 1 the company's planes had been flown 3 522 076 mi since July 1, 1929 and had carried 29 805 passengers Mileage of airways covered by Pan American System was increased from 12 000 to 18 217 Planes are scheduled to fly 80 868 mi weekly

Southwest Air Fast Express states that during the first 6 mo. of this year 233 019 passengers were carried and that there was an increase from 1 580 passengers in January naturally a low month, to 4,999 in June There has been no appreciable decrease since the raise in rates effective June 15

Stout Air Service planes flew a total of 333 497 mi during the first 6 mo of 1930 an increase of more than 100 per cent over the first 6 mo of 1929 Stanley E. Knauss, general manager of the lines has announced The mileage piled up during the first half of last year was 157 996 mi Both figures include special flights and aerial tours made by the company

T A T Maddux made a company record in June by carrying 5,688 persons as compared with 5,474 for May the previous high water mark The company's planes were flown 246 525 mi as compared with the previous record of 245 129 mi flown in April

Varney Air Lines a new comer in the passenger field, carried 130 persons in June. This was a 20 per cent increase over the traffic in May

American Airways planes carried 7 708 passengers in June This was a gain of 11 per cent and the revenue increased 12 per cent During the first 6 mo. a total of 34 959 passengers were carried

Air Mail Statistical Report for May, 1930

Route Number and Termini	Length of Route (Mi)	Frequency (Round Trips per Month Scheduled)	Miles of Service — Scheduled	Miles of Service — Actually Flown	Total Weight of Mails Dispatched (Lb)	Amount Paid to Contractor
1 Boston–New York	200	26	16 600	12 057	12 254	$16 885 55
2. Chicago–St Louis	276	62	54 224	55 120	5 257	20 097 58
3 Chicago–Dallas	1 078	62	125 984	117 756	37 942	102 622 15
4 Salt Lake City–Los Angeles	651	58	75 516	74 055	75 163	104,103 22
5. Salt Lake City–Pasco	540	62	67 952	67 464	25,092	63 964 19
8. Seattle–Los Angeles (a)	1 141	31	65 999	65,291	22 115	62,773 86
9 Chicago–Minneapolis	664	93	87 234	86 081	19 929	54 805 63
11 Cleveland Pittsburgh	123	62	15 744	15,558	6 112	18,556 19
12. Cheyenne–Pueblo	109	31	15 285	11 070	7 219	6 402 05
16. Cleveland–Louisville	345	31	25 002	21 567	7 605	9 521 57
17 New York–Chicago	718	62	117 547	112 605	152 020	121 458 59
18 Chicago San Francisco	1 952	58	241 720	222,469	185 858	356 422 60
19 New York Atlanta	780	62	100 554	105 271	42,141	126 125 19
20 Albany–Cleveland	446	27	24 084	25 650	6,077	6,245 96
21 Dallas–Galveston	528	31	19 840	17 704	5 402	9 855 22
22 Dallas–Brownsville	529	31	35 046	32 615	2 122	20 727 98
23 Atlanta New Orleans	485	51	29 946	28 008	11 056	19 365 59
24 Chicago–Cincinnati	270	62	35 370	32,935	6 749	9 921 76
25 Atlanta–Miami	754	31	48,156	47 602	16 548	25 067 58
26 Great Falls–Salt Lake City	489	31	59 616	59 016	4 964	12 284 97
27 Bay City–Chicago	773	26	58,840	57 560	16 505	14 563 90
28 St Louis–Omaha	404	62	50 096	47 958	15 028	12,425 03
29 New Orleans–Houston	319	51	19 778	19 778	4 947	4 947 19
30 Chicago–Atlanta	768	31	61 503	56 428	11 628	9 068 06
32 Pasco–Seattle	449	51	33,556	33,212	15,602	1 674 14
Totals	14 059	1 125	1 447 667	1 392 439	702 499	$1 188 961 31

(a) Southbound trip not operated between Seattle and Portland

Passenger Service On P.A.T. Improved

SEATTLE—Mexican and Canadian cities on the Pacific Coast were brought within 18 hr travel time July 1 by Pacific Air Transport's new combination mail and passenger plane schedule on the San Diego-Seattle route.

The line has extended its Seattle Los Angeles route to San Diego and the 1,204 mi between San Diego and Seattle will be flown in 12 hr. 45 min against train time of 49 hr, 30 min

Average flying time is 108 m.p.h. Stops are made at Los Angeles Bakersfield Fresno Oakland Medford Portland and Tacoma. On the northbound trip 500 mi is flown at night and mail and passengers leaving San Diego at 10 15 p m and Los Angeles at 11 45 arrive at Seattle at 11 a.m The southbound trip is by daylight.

Through connecting surface transportation at San Diego and Seattle the trip from Agua Caliente, Mexico, to Vancouver, British Columbia, can be made in 18 hr

Seven-day-a-week service has been instituted by the West Coast Air Transport Corp flying the Seattle Portland Oakland route Morgen R Nickell district passenger agent announces Connection is made at Oakland with the Fokker F 32 s of Western Air Express, offering through service from Seattle to Los Angeles in 10 hr 30 min

Milwaukee Has Air-rail Service

MILWAUKEE—Kohler Aviation Co has arranged plane-train service in co-operation with the Chicago & Northwestern Railroad, with three planes daily across Lake Michigan in both directions between this city and Muskegon and Grand Rapids Mich The new service is made possible by the establishment of a unified air-rail terminal on the lakefront of downtown Milwaukee Passengers traveling between eastern points and the northwest are saved several hours required by the trip around the lake through Chicago On Saturdays, also there is special service from Milwaukee to resorts in Michigan and Wisconsin connecting with trains from Chicago and other points

Colonial Makes More Changes

NEW YORK—Waldo Brown for some time division traffic manager of Colonial at Boston, has resigned and Goodrich K Murphy, who has been associated here with B A Pollett general Colonial traffic manager has been assigned to cover Brown's former post Traffic offices here are being moved to the Chanin Building where the other local units of American Airways are quartered and the operating departments are being moved to Newark Municipal Airport where Colonial has a large hangar with office space

Announce Port Lighting Division

ELIZABETH (N J)—The American Gas Accumulator Co has formed an airport lighting division which will act as exclusive distributing agent for that company, for B B T Corp of America, and for Sperry Gyroscope Co, Inc

June Air Mail Traffic Shows Drop

WASHINGTON—The volume of air mail on the 25 domestic contract routes decreased in June from the total for May However, the daily average was greater being 27 226 lb as compared with 26,425 lb in May This indicates that the decrease may be accounted for partly by the fact that there was one less day in June The June poundage was 680 660 and the decrease was 6 393 lb

The Post Office Department's preliminary figures follow

	Mileage	April	May	June
Boston New York	192	11 074	12,254	18,425
Chicago-St. Louis	278	4 719	5 257	5 105
Chicago-Dallas	1059	58 989	37 945	57 654
S t Lake-Los Ang	600	72 527	75 162	70 400
Salt Lake-Pasco	530	23 251	25,092	24 017
Seattle Los Ang.	1141	21 659	22 129	22,091
Chicago-Minn.	505	18,876	19 942	20,635
Cleveland Pitts	123	5,399	6,117	5,517
Cheyenne-Pueblo	199	4 635	7 207	8,563
Cleveland L ville.	345	6 675	7 022	7 453
N Y Chicago	718	117 121	142,596	152 484
Chicago-San Fran	1932	190,521	159 540	159 509
N Y Atlanta	765	37 572	41 495	38,605
Albany-Cleveland	416	5,699	6 097	5 847
Dallas-Galveston	528	3,541	3 405	3 050
Dallas Br nsville	529	2,225	2 225	2.178
Atlanta-New Orl.	485	9 292	11 066	9 883
Chicago-Cin ti.	270	6 740	6,750	2 102
Atlanta-Miami	756	12 541	16 521	14 456
Gr Falls-S t Lake.	489	4 606	4 963	5,524
Chicago-Bay City	712	16,686	16,547	17 289
St. Louis-Omaha.	405	14 741	15 028	15,726
N O Houston	510	5 960	4 947	3,844
Chicago-Atlanta.	768	12,667	12 197	10,953
Pasco-Seattle	449	16 105	10 601	12 452
Total		671 391	687 055	680 660

Decrease—6,393 lb

Daily average—27 226 lb for June.

Port Men Plan Denver Meeting

TULSA—A divisional conference of airport managers of the south-central division, Airport Section Aeronautical Chamber of Commerce will be held in Denver the first week in August, according to an announcement by Charles W Short, Jr manager of Tulsa Municipal Airport and chairman of the division.

Bendix to Build South Bend Port

SOUTH BEND (IND)—Bendix Aviation Corp has announced that it will develop a $500 000 airport on a 400 acre tract at Lincolnway W and the city limits Bendix Airport Inc a half-million dollar company, is being formed to carry out the project.

▪ *Airways* ▪

Capt W J Griffith Jr., will spend the next two months touring New England to collect data for a New England airport directory which will be issued by the Vacuum Oil Co

S A F E now runs planes which do not stop between Tulsa and Dallas Kansas City, or St Louis in addition to those which make the regular intermediate stops on the three routes.

The New Jersey Board of Public Utility Commissioners is investigating the hazard to aviation which might result from a proposed cross-state high tension power line, before authorizing its construction

Oklahoma Short Line Airway, Inc., which recently inaugurated passenger service between Tulsa, Little Rock and Memphis plans to extend the line to Nashville in the near future, and later to Louisville.

Curtiss-Wright Flying Service does not expect to resume service between Boston and Bar Harbor, Me, this season

A Pan American plane was recently flown from San Juan, Porto Rico to Miami in 9 hr 51 min., averaging 145 m.p h. during actual flying, but with three intermediate landings

A radio range beacon is being installed at Hunters Point, Va., which will complete the chain on the New York-Atlanta airway

Loss estimated at $25 000 resulted from a fire at Lawson airport Arkansas City, Kan., July 6.

Taxes at Port Columbus have been reduced from $.03 per gal of gesoline and $.15 per gel of oil to $.015 and $.10, respectively Standard Oil Co has the concession for sale of fuel at the port

An air operators' association has been formed at Portland Ore

A radio station for broadcasting weather reports with call letters WQDW has been completed at Ford Airport Detroit and sends out reports every 30 min from 8.25 a.m to 4 25 p m, on 393 kc

Alaska-Wash. Adds Vegas

SEATTLE — Alaska-Washington Airways according to J L Carman Jr president has added two new Lockheed Vega seaplanes costing $40 000, to its equipment. One of the new planes will be used to extend the Alaskan division passenger line from Juneau to Cordova the other will be used to give increased service from Seattle to Victoria and Vancouver, B C., making Port Townsend a port of call with occasional service to Port Angeles. At Victoria, a new passenger terminal will be built at once

■ Airport Construction ■

New Sites, Enlargements

Central

The Galesburg (Ill) Chamber of Commerce has taken an option upon a tract of land, and if a $50,000 stock issue can be subscribed, will proceed at once with plans for an airport.

The Beatrice (Neb) Airport Co has secured a lease on a farm which it expects to purchase later for $28,000.

Southern

A landing field 1800 ft. square has been donated to the city of Spur, Tex., by S. M. Swenson and Sons through the Texas manager, Clifford B. Jones. The field is being conditioned for use.

A landing field is being built in Rockport, Tex., by the Rockport Goodfellowship Club and a circle 100 ft. wide is under construction.

Two sites are being considered for the new airport at Tuscaloosa, Ala.

Western

A 30,000 acre landing field is being laid out at Picketwire, Colo., a town with an estimated population of 30 people which lies on the Denver-Pueblo-Amarillo route. The land is perfectly level; its development into a landing field requires merely the clearing away of a few cactus plants, the marking of a circle, and the erection of a wind sock.

The expenditure of $50,000 to acquire an additional 30-acre tract for the south end of the Naval Air Station at Sand Point, Wash., has been authorized.

Construction has started on an 80-acre emergency landing field west of Atwater, Calif., on the San Francisco-Los Angeles airline. Leveling will be complete about August 1. Lighting will be installed, and ultimate plans call for several hangars.

Surfacing and Improvements

Wolfeboro, N. H., has passed an appropriation for the construction of a seaplane dock, ramp, and base.

The temporary landing field at Athens, Ohio, will have its runway extended to 3,000 ft., and will be developed into a permanent port. Work on a hangar is to begin early in August.

The contract has been let for clearing the runways of the new 160 acre airport at Wauchula, Fla., operated by Wauchula Airways, Inc.

A bond issue of $30,000 has been voted for airport improvements at Big Spring, Tex.

A 150-ft. taxi strip of asphalt running the length of the field, is under construction at Love Field, Dallas. Drainage of the field is also being improved and a wind indicator has been placed on hangar No. 2.

Improvements at Eastland, Tex., include the grading of the 115-acre field, clearing of 55 acres of runway surface, and the erection of two beacon lights of 3,000,000 and 1,500,000 cp. respectively, the second to be colored and used as signal.

The boundary fence along the east side of Bates Field, the Mobile (Ala.) municipal port, is practically completed.

New Buildings

The erection of a Priggen portable steel hangar is practically complete at the Sanford (Me.) airport. It will be used by the Young and Temple Co.

The International Steel and Iron Co., Evansville, Ind., has been awarded a contract for the erection of an all-steel hangar at the Burlington (Ia.) Municipal Airport and work has first started upon concrete foundations for the building. The hangar will measure 80x100 ft. and accommodate 16 planes; it will have an 18-ft. clearance at the doors. Plans for installation of field lights and other equipment are being drawn up and contracts will be let soon.

The Great Plains Aircraft Co., Hastings, Neb., is planning to build an $8,000 addition to its hangar.

Burlington, Ia., is seeking bids for the erection of a steel hangar at the municipal airport.

The hangar at Finkle Brothers' Airport, Leland, Miss., recently destroyed by fire, will be rebuilt immediately.

Management of United Airport, Burbank, Calif., has announced plans for the erection of three hangars each 150x340 ft. The buildings will be of fireproof construction, being built of masonry and steel, and will be done in Spanish style with plastered walls and a red tile roof.

A $5,000 office building is to be built at the Lordsburg (N. M.) airport. Two radio towers 85 ft. high, with 350-ft. antennas, are also planned.

Equipment and Lighting

Bids are now open at Moran, Kan., for the construction of a Federal radio range station and a 100-acre government emergency landing field on Highway No. 54, 10 mi. east of Iola, Kan.

Boundary lights have recently been installed at the Nepco Tricity Airport, Wisconsin Rapids, Wis. A beacon and floodlights were already in use.

Mail Plane Seat Ruling to be Enforced

WASHINGTON—In accordance with its policy of using mail lines as a basis for building up passenger transport, the Post Office Department is preparing to put into effect a series of orders requiring contractors to furnish accommodations for at least two passengers on the mail planes operated during daylight hours. These orders were issued on May 5 and allow a 90-day period for compliance.

No plans have yet been made by postal officials for enforcing the order. Plenty of time will be given, especially in the case of the trunk line routes that carry heavy mail, as compliance will require heavy expenditures. According to estimates that have been made by the Post Office Department it will cost over $500,000 to provide passenger facilities on some of the heavy traffic air mail routes.

Since the order in question was not made a part of the contract with the operators, its enforcement will have to be carried out separately. The commonly accepted method by which it is believed that the government will enforce the order is through the issuance of certificates. Under the new air mail act—the Watres bill—contractors who have been operating mail lines for 2 yr. or more are eligible to receive the certificates which are effective for a period of 10 yr. Thus it is believed that certificates will be refused those carriers that manifest an unwillingness to supply the required passenger accommodations.

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Calls Transports Easily Convertible to Bombers

GENEVA—Modern airliners can be easily converted into night bombers, and should be taken into consideration in any aviation disarmament program, according to a report submitted to the League of Nations Commission by Brig. Gen. P. C. Groves, British aviation authority. In disagreeing with the report of civil aviation experts who met in Brussels in 1927, General Groves points to the steadily increasing performance of transport planes, similar in nature to that required of bombers. Among types which he mentions specifically as easily convertible are the Handley Page liners, DeHavilland Hercules, Farman Goliaths, Junkers and Rohrbach multi-engined monoplanes, and the tri-engined Fords.

On the other hand, he finds light planes of 40 to 100 hp. useless as fighters, but possibly available for auxiliary work, such as artillery cooperation, aerial photography, and reconnaissance. General Groves reports that the lack of specific provision for military equipment does not seriously affect the convertability of civil planes, since at most it might make a difference of a few days.

■ Foreign ■

The Stockholm International Aeronautical Exhibition, which was scheduled for Sept. 6, has been postponed until May 15-31, 1931, because of a strike.

Irvin Air Chute of Great Britain, Ltd., reports orders for 200 parachutes from the Royal Air Force, for 200 parachutes from the Government of Czechoslovakia and for a number of parachutes from the Air Corps of the Irish Free State.

The price of the Redwing, built by Robinson Aircraft Co., Ltd., Surrey, England, has been set at $2,795, making it competitive with the standard Moth and Avian. It is a two-place side by side biplane with 85 hp. Hornet engine.

Two Blackburn Iris Flying Boats belonging to the British Royal Air Forces started June 22 on a flying visit to Iceland to participate in the celebration of the 1,000th anniversary of the Icelandic Parliament.

Mail from Karachi was recently received at Croydon in the record time of six days.

The Breda 15 two place cabin monoplane, with Gipsy engine, is being sold in England for about $4,125 by International Aircraft, Ltd.

The lift of the R 101 has been increased three tons by letting out the wire netting enclosing the gas bags and the Servo motors weighing another three tons, have been removed. As previously announced the lift will be further increased by an extra bay in the hull before the flight to India next autumn.

Henlys Ltd. has received permission from the British Air Ministry to build a new airport at Croydon, to be used for light planes only.

The British Air Ministry has issued a notice to airmen advising them of proper procedure in notifying airports on both sides of proposed cross Channel flights, so that search may be instituted immediately if the plane does not get across safely.

The British Air Ministry has loaned a 1,250 hp. Napier aero engine to N. Smith, Australian race driver for installation in an automobile with which he will attempt to better the present speed record.

The Italian company, S.A.N.A., has opened a seaplane base at Ostia, near Rome.

Societa Italiana Servizi Aerei inaugurated a Trieste-Brioni-Lussino-Zara line June 14. At present, the service is weekly. The Transadriatica company has begun daily service between Venice and Trent, and between Vienna and Budapest.

"The Day of the Wing," with exhibitions for the benefit of the Institution for the Orphans of Aviators, was celebrated in Rome June 8. Nearly 200 military planes participated, and there were about 100,000 spectators.

Five lives were lost when a Luft Hansa Dornier-Wal flying boat was swamped after making a forced landing during a severe storm in the Baltic Sea.

Three new Russian airways are to be inaugurated this summer bringing the total mileage from 7,438 mi. to 11,445 mi.; and during the next three years the length of airways in U.S.S.R. will be increased to 25,955 mi., according to a recent statement by Lord Thomson, British Secretary of State for Air.

On June 1, there were 564 licensed pilots in Switzerland, divided as follows: Private, 352; Commercial, 89; Balloon (free), 61; Dirigible, 1; Glider, 11; Acrobatic, 50.

New radio stations for aviation weather broadcasts have been opened at Tomie and Tsushima Island, Japan. Previously established stations are located at Hakone, Kameyama, and Fukuoka.

Mexican Ministry of War and Marine will equip planes of the first and second air regiments with radio.

According to a recent Department of Commerce report there are now 43 civil airplanes in Brazil, of which three are American, seven British, nineteen German, two Italian, and twelve French.

Pan American Airways has started night air mail in Mexico on the Brownsville-Tampico-Vera Cruz route.

National Aviation Co., a new Mexican firm represented by Wilfrido Lozano is planning to establish a passenger and mail service between Oacaca City and Tuxtepec, in the banana producing section of the state, and to Tlaxiaco, Pochutla and Juquila in the coffee producing regions.

Complete Shell For British Tunnel

Structure to be Largest Of its Kind in the World

SHEFFIELD (ENGLAND)—The firm of Messrs. John Brown and Co. Ltd., of this city has recently completed the shell of large variable density wind tunnel which will be installed in the National Physical Laboratory. The shell has an internal diameter of 17 ft. and is 50 ft. long.

Four seamless hollow rolled, steel rings and two cast steel ends make up the structure. The rings in their finished state weigh 56 tons apiece, while the end castings weigh 29 tons each. The total weight of the shell, completely set up, is 280 tons. The entire structure is bolted together with specially designed high tension bolts and nuts, entrance being gained through the end.

Langley Tunnel Smaller

It is interesting to note the differences between this structure and the one at Langley Field, Va., set up in 1925. The Langley Field shell is made up of lapped steel plates, following the conventional steam boiler practice, and weighs 100 tons. It has an internal diameter of 15 ft. and is 34 ft. long. The Langley tunnel is capable of working at a pressure of 308.6 lb. per sq. in. The British shell has been tested up to 550 lb. per sq. in.

The four rings of the British tunnel are held together by specially designed steel straps, fitting over flanges on the rings. The entire structure is supported on two cast steel brackets mounted to the outer rings. The shell is to be transported, after dismantling, by road from Sheffield to Teddington, a distance of approximately 150 miles.

Steel Shell for new British High Pressure Wind Tunnel

Plan Additions To Peruvian Lines

Three Firms Carried 2,874 Passengers in Year

LIMA—Two new air lines and several extensions of existing routes are being planned by the Peruvian Government and the companies operating here. The airway from San Ramon to Puerto Maldonado, in southeast Peru, has been surveyed and will probably be inaugurated early in 1931. A survey is now being made, under the direction of Comdr. Harold B. Grow, Inspector General of the route for the proposed Naval line from Cajamarca to Yurimaguas. It is expected that the present Naval airline will be extended from San Ramon to Iquitos and Manaos, Brazil.

The Lima-Arequipa line is to be extended as far as Puno-Juliaca and Cuzco, the city of the Incas, in southern Peru, but it has not been announced under whose auspices. Faucett Aviation Co. has been considering the project. Lloyd Aero Boliviano has also requested permission to extend its lines as far as Mollendo, Peru, via Puno and Arequipa. The Chilean National Air Line is also considering extension of its line from Arica to Lima.

Open Airport at Trujillo

Faucett Aviation Co., which operates passenger and mail service between Lima and Talara, and between Lima and Tacna using Stinson Detroiter planes, has just opened a new landing field at Trujillo. It is about 2,800 x 520 ft. A hangar has been built, and an administration building is under construction. The company has landing fields also at Chiclayo, Chimbote, and Santa Cruz, near Lima.

The Department of Civil Aviation in the Ministry of Marine and Aviation has just issued statistics covering the first year of official supervision, from June, 1929, to the end of last May. During that time, 2,874 passengers were carried on the three commercial airlines: Faucett Aviation Co., Panagra, Inc., and Peruvian Naval Airline. The monthly figures showed a moderate, steady increase. May being the largest month with 540 passengers carried.

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Mexican Air Law is Signed

MEXICO CITY—President Rubio has now signed the new Mexican aviation laws, and their passage by the legislature is considered assured. One of the most important provisions is the rule that all foreign planes must obtain permission from the Ministry of Communications and Public Works before flying over Mexican territory. The regulations governing airway concessionaires are also much stricter than heretofore, particularly as regards conditions of equipment, landing fields, and hangars.

British Study Propeller Noise

LONDON—The British National Physical Laboratory has issued a report on propeller experiments, particularly as regards noise produced. High speed has been found to contribute especially to noisiness: an increase of 100 ft. per sec. in tip speed producing a 1,000 per cent increase of sound. It was found that blades with thin section are quieter than those with thick section. Four-bladed propellers are quieter than those with only two blades.

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Latecoere 28 Holds Ten International Marks

PARIS—In addition to four records previously announced (AVIATION, July 5), Lieut. Paulin Paris made three more International Records for seaplanes in a second attempt, June 23. He also raised the record for speed over 2,000 km. with 1,000 kg. load which he had established the previous day. He was using a Latecoere 28 seaplane, with 650 hp. Hispano-Suiza engine. This machine now holds ten International Records, as follows:

Speed for 100 km. with 2,000 kg. load: 136 m.p.h. By Lieut. Prevost, March 5.
Speed for 500 km. with 2,000 kg. load: 124 m.p.h. By Lieut. Prevost, March 6.
Airline distance: 2,575 mi. By Jean Mermoz.
Speed for 2,000 km. with 1,000 kg. load: 117 m.p.h. By Lieut. Paulin Paris, June 23.
Distance with 500 kg. load: 1,771 mi. do. June 22-23.
Distance with 1,000 kg. load: 1,771 mi. do. June 22-23.
Duration with 1,000 kg. load: 20 hr., 24 min. do. June 22-23.
Speed for 1,000 km. with 1,000 kg. load: 117 m.p.h. do., June 23.
Speed for 2,000 km. without load: 117 m.p.h. do., June 23.
Speed for 2,000 km. with 500 kg. load: 117 m.p.h. do. June 23.

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Mexican States Plan Airline

MEXICO CITY—Governors of eleven Mexican States have agreed to cooperate in a plan for passenger and mail air service. The plan was originated by General Cedillo, governor of San Luis Potosi, and the new line will have its center there. Other cities to be connected are: Monterrey, Torreon, Ciudad Victoria, Tampico, Saltillo, Chihuahua City, Guadalajara, Aguas Calientes, Leon, Guanajuato City, Morelia, and Mexico City. Service is expected to be inaugurated in September. The new routes are reported not to conflict with existing airlines.

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Swiss Carry Ship Mail by Air

BASEL—All Swiss mail to and from the United States will be carried here after by plane between this city and Cherbourg, France. Except for the inaugural flight July 5, no surcharge is made for the service. A Swiss company has been given a contract to send planes to meet all fast ships at the French port.

Fail to Fly Mail Over South Atlantic

Mermoz Forced Down During Attempt to Repeat

DAKAR (SENEGAL)—After covering about two-thirds of the distance from Natal with 600 lb. of mail in his Latecoere 28 seaplane, Jean Mermoz was forced to descend because of a leaky oil line. He and his companions, together with the mail, were taken aboard one of the boats which had been stationed along the route by the Compagnie Aeropostale. It was found impossible to tow the plane, and it was sunk after all valuable equipment was removed.

This flight, which had been postponed many weeks due to unfavorable weather conditions, was an attempt to repeat in the opposite direction pilot Mermoz's successful flight from Dakar to Natal May 13, when he carried 308 lb. of mail. The landing at sea was made after 14 hr. in the air. The plane had enough gasoline for another 12 hr., giving more than an ample margin of safety to reach its destination. The previous flight took a little over 20 hr. Mermoz was accompanied by Leopold Gimme, radio operator, and Jean d'Abry, navigator. It is believed that this failure will not seriously interfere with the company's plans to establish regular air mail over the South Atlantic.

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Farman Produces New Models

BILLANCOURT (FRANCE)—A plane with an airtight cabin, and designed by Henry Farman to have a ceiling of about 60,000 ft., is under construction here and due to be completed in December. Mr. Waseige, chief engineer of the Farman company, is engaged on the design of a 350 hp. inverted engine with three stage supercharger. A new 250 hp. 9 cyl. radial has just been completed, and is undergoing tests, as is a 700 hp. 18-cyl. inverted engine of the broad arrow type. The latter engine weighs 798 lb., and is geared for a propeller speed of 1,000 r.p.m. at an engine speed of 2,800 r.p.m.

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British to Test Flying Boats

LONDON—Experimental flying boats built by four British companies are soon to be given extensive tests by the Royal Air Force with a view to finding a suitable type for long range reconnaissance and similar duties. Blackburn has completed an entirely new model with three Jupiter engines, as well as a modified Iris boat with three 700 hp. Leopard engines, the former being a monoplane and the latter a biplane. Supermarine has built a new monoplane flying boat, while Saunders Roe and Short Brothers have built biplanes. All have air cooled engines, and all are designed for a range of over 2,000 mi. with useful load.

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BRAND new Cleone motor as received from factory complete with prop. Weight 89 lbs. H.P. 27 air cooled. Received through trade. Retail price $325. My price $275. If you mean business answer this ad. Fred Wharton Jacksonville Illinois.

DAVIS monoplane. Licensed demonstrator sixty hours certified. LeBlond motor. Accept late Ford or Chevrolet part payment. Can arrange finance. Cash price $1,795. Cline Cole Carbondale, Illinois.

EAGLEROCK 1929 model, duco finish, cover lap like new, motor just overhauled, turns 1,450 on ground. Price $1,000 cash. Address John Kuninha, Kansas, Kansas.

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FOR SALE. New improved single-place Albert monoplane powered with 5 cylinder air-cooled Salmson motor. Top speed 110 m.p.h. Landing speed 40. Demonstration at Teterboro Airport. $1,800. W. D. Davis 789 Grand Ave., Ridgefield N. J. Telephone Morsemere 8-4856 before 7 a.m.

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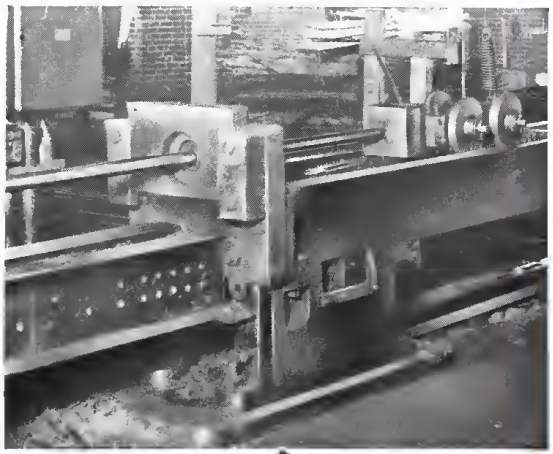

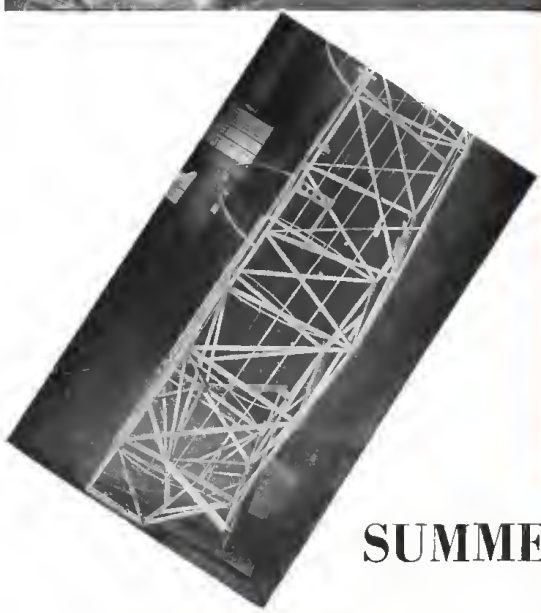

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